0670

EUGENE DIETZGEN CO.,

Drawing Materials and Surveying Instruments.

NEW YORK. CHICAGO. SAN FRANCISCO.

TABLES FOR EXCAVATIONS AND EMBANKMENTS.

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

ROADWAY 20 FEET WIDE. SIDE SLOPES 1 TO 1.
FOR SINGLE TRACK EXCAVATION.

"Copyright, 1902, by Eugene Dietzgen Co."

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	10.0	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8	10.9	0
1	11.0	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8	11.9	1
2	12.0	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8	12.9	2
3	13.0	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8	13.9	3
4	14.0	14.1	14.2	14.3	14.4	14.5	14.6	14.7	14.8	14.9	4
5	15.0	15.1	15.2	15.3	15.4	15.5	15.6	15.7	15.8	15.9	5
6	16.0	16.1	16.2	16.3	16.4	16.5	16.6	16.7	16.8	16.9	6
7	17.0	17.1	17.2	17.3	17.4	17.5	17.6	17.7	17.8	17.9	7
8	18.0	18.1	18.2	18.3	18.4	18.5	18.6	18.7	18.8	18.9	8
9	19.0	19.1	19.2	19.3	19.4	19.5	19.6	19.7	19.8	19.9	9
10	20.0	20.1	20.2	20.3	20.4	20.5	20.6	20.7	20.8	20.9	10
11	21.0	21.1	21.2	21.3	21.4	21.5	21.6	21.7	21.8	21.9	11
12	22.0	22.1	22.2	22.3	22.4	22.5	22.6	22.7	22.8	22.9	12
13	23.0	23.1	23.2	23.3	23.4	23.5	23.6	23.7	23.8	23.9	13
14	24.0	24.1	24.2	24.3	24.4	24.5	24.6	24.7	24.8	24.9	14
15	25.0	25.1	25.2	25.3	25.4	25.5	25.6	25.7	25.8	25.9	15
16	26.0	26.1	26.2	26.3	26.4	26.5	26.6	26.7	26.8	26.9	16
17	27.0	27.1	27.2	27.3	27.4	27.5	27.6	27.7	27.8	27.9	17
18	28.0	28.1	28.2	28.3	28.4	28.5	28.6	28.7	28.8	28.9	18
19	29.0	29.1	29.2	29.3	29.4	29.5	29.6	29.7	29.8	29.9	19
20	30.0	30.1	30.2	30.3	30.4	30.5	30.6	30.7	30.8	30.9	20
21	31.0	31.1	31.2	31.3	31.4	31.5	31.6	31.7	31.8	31.9	21
22	32.0	32.1	32.2	32.3	32.4	32.5	32.6	32.7	32.8	32.9	22
23	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	23
24	34.0	34.1	34.2	34.3	34.4	34.5	34.6	34.7	34.8	34.9	24
25	35.0	35.1	35.2	35.3	35.4	35.5	35.6	35.7	35.8	35.9	25
26	36.0	36.1	36.2	36.3	36.4	36.5	36.6	36.7	36.8	36.9	26
27	37.0	37.1	37.2	37.3	37.4	37.5	37.6	37.7	37.8	37.9	27
28	38.0	38.1	38.2	38.3	38.4	38.5	38.6	38.7	38.8	38.9	28
29	39.0	39.1	39.2	39.3	39.4	39.5	39.6	39.7	39.8	39.9	29
30	40.0	40.1	40.2	40.3	40.4	40.5	40.6	40.7	40.8	40.9	30
31	41.0	41.1	41.2	41.3	41.4	41.5	41.6	41.7	41.8	41.9	31
32	42.0	42.1	42.2	42.3	42.4	42.5	42.6	42.7	42,8	42.9	32
33	43.0	43.1	43.2	43.3	43.4	43.5	43.6	43.7	43.8	43.9	33
34	44.0	44.1	44.2	44.3	44.4	44.5	44.6	44.7	44.8	44.9	34
35	45.0	45.1	45.2	45.3	45.4	45.5	45.6	45.7	45.8	45.9	35
36	46.0	46.1	46.2	46.3	46.4	46.5	46.6	46.7	46.8	46.9	36
37	47.0	47.1	47.2	47.3	47.4	47.5	47.6	47.7	47.8	47.9	37
38	48.0	48.1	48.2	48.3	48.4	48.5	48.6	48.7	48.8	48.9	38
39	49.0	49.1	49.2	49.3	49.4	49.5	49.6	49.7	49.8	49.9	39
40	50.0	50.1	50.2	50.3	50.4	50.5	50.6	50.7	50.8	50.9	40

Calculated by F. E. Paradis, C. E.

SOUTHERN PACIFIC CO.
SAN FRANCISCO
JUL 3 190
ENGINEERING DEPARTMENT

50371

0671

Index

Sacramento Southern R.R.

2. Members of party
3 Purpose of survey
4-47 T Line Location Notes
55-6 Traverse of Runyon Levee to Right of T Line
57 Traverse of Runyon Levee to Left of Line
58 Traverse of Levee Between Locke & Wise
59-64 Traverse of Pierson Levee on South of Pierson District.
48 Map showing Location of Center of Section 14 T.5N R.4E.
54 Traverse Locating Clarke Runyon Property Line
73-79 Reference Points T Line
76-78 S Line for spur
79 Connection of T and S. Line

0672

Members of party

Bradford Wheeler	Assistant Engineer	Sacramento	California
Drury Butler	Transit man	"	"
P. A Dulour	Leveller	Fair Oaks	"
O. Maisel	Rodman	Stockton	"
Clift. Yost	Rodman	Folsom	"
E. O. Henderson	Rear Chain	Stockton	"
Fred. Sproston	Stake Artist	Sacramento	"
Geo Bonnifoy	Back flag	"	"
A.C. Hall	Axeman	"	"
Norbert Mosher	Teamster	Clarksburg	"

Purpose of survey

This T Line was run as a location line over the same route as the P line preliminary. The survey was began Nov 19 1905.

"T"

	Def Lt	Def. Rt	Mag. C.	Calc C.
+25				
743	2° 06½			
+50	1° 59'			
742	1° 51½'			
+76 △	1° 48'			
+62				
+ 52	Fence			
+50 △	1° 44'			
741	1° 36½			
+50	1° 29'			
740	1° 21½'			
+50	1° 14'			
739	1° 06½'			
+50	0° 59'			
738	0° 51½			
+50	0° 44'			
737	0° 36½'			
+50	0° 29'			
736	0° 21½'			
+50	0° 14'			
735	0° 06½'			
T 734+55½ △	B.C. 0° 30' Lt			S 2° 31' W
=				
E 734+55½ △	Point on Tangent			

Total curvature = 8° 07' Semitangent = 296.8 Length of curve = [illegible]

Abandoned

To (

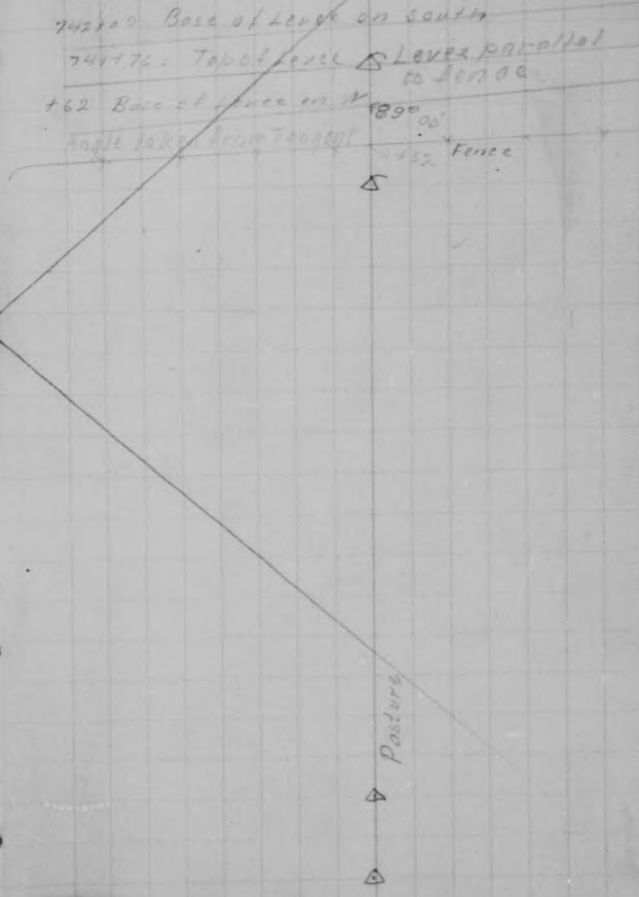
Nov. 19 1906

+25 Base of Levee

742+00 Base of Levee on south

741+76 = Top of Levee △ Levee parallel to fence

+62 Base of Levee on N



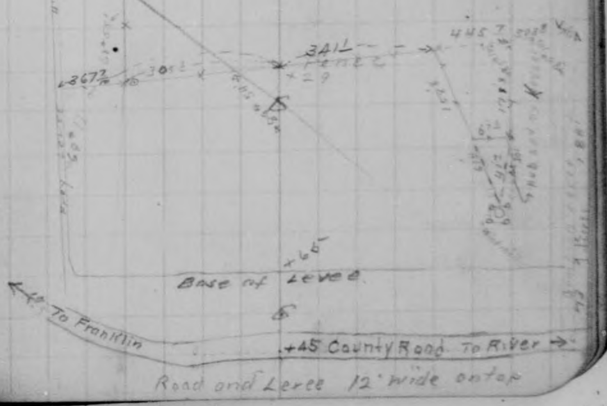
T

	Def L	Def R	Mag C	Calc C.
753			S25°05E	S6°96'E
+50				
+45 3/32 △	4° 28½	E.C.		
752	4° 21½			
+50	4° 14'			
751	4° 06½			
+50	3° 59'			
750	3° 51½			
+50	3° 44'			
749	3° 36½			
+50	3° 29'			
748	3° 21½			
+50	3° 14'			
747	3° 06½			
+50	2° 59'			
746	2° 51½			
+50	2° 44'			
+29	Fence			
+27△	2° 41'			
745	2° 36½			
+50	2° 29'			
744	2° 21½			
+65	Base of Levee S. side			
+50△	2° 14'			
+45	Or County road on levee			

Abandoned

Nov 20 190

Henry Frey
Pasture Land
Partially Reclaimed



T
765
+50
764
+50
763
+50
762
+50
761
+92^{5} Δ
+50
760
+50
759
+50
758
+50
757
+50
756
+50
755
+50
754
+50

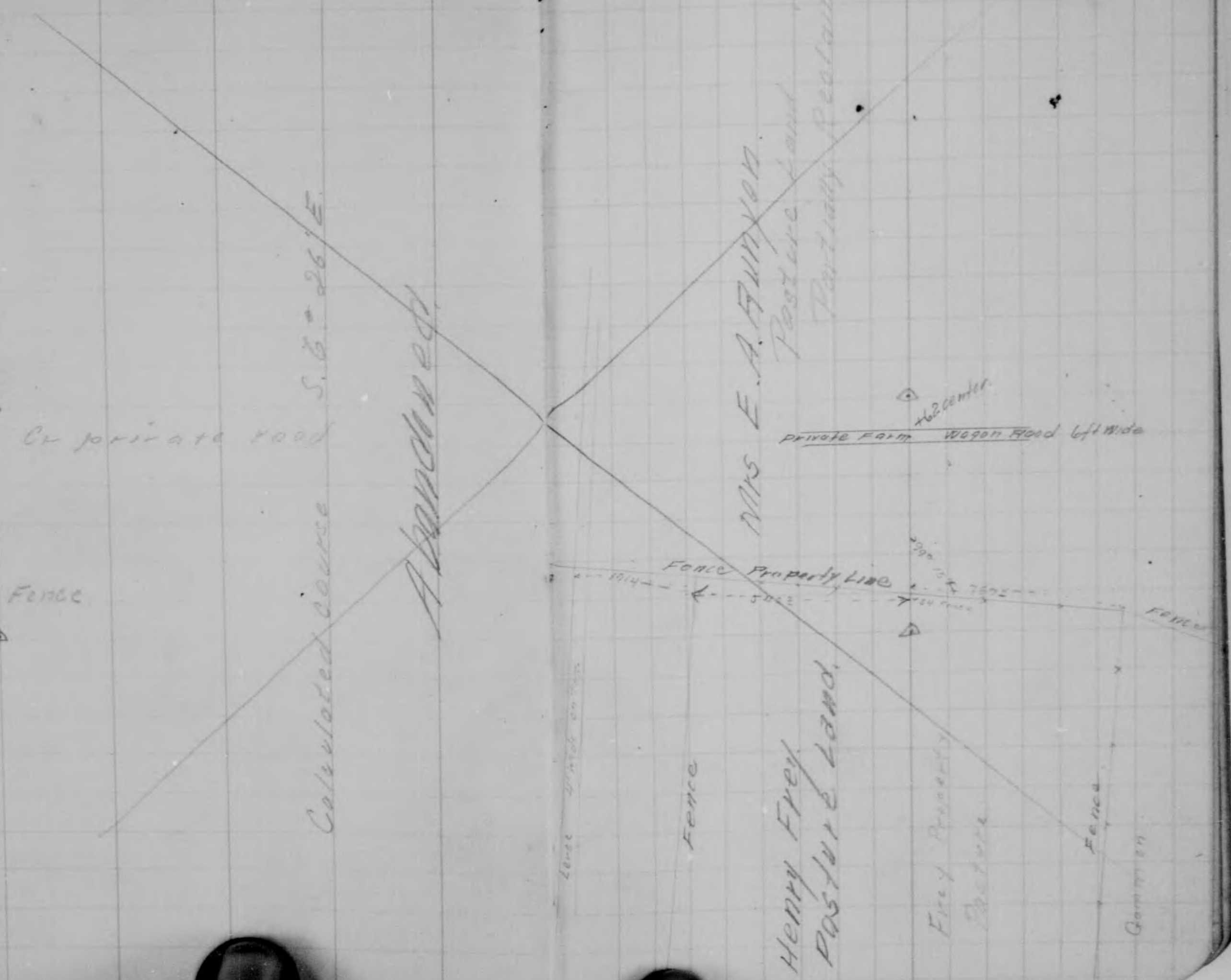
Calculated course S 6° 26' E

Abandoned

Henry Frey
Pasture Land
Partially Reclaimed

T

+50
775
+50
774
+50
773
+50
772
+50
771
+93½ △
+62 Cr private road
+50
770
+50
+34 Fence
+32 △
769
+50
768
+50
767
+50
766
+50



T

787
+50
786
+50
785
+50
784
+50
783
+50
782
+50
781
+92.3 △
+50
780
+50
779
+50
776
+50
+48
777
+50
776

Calculated Course S.6° 26' E.

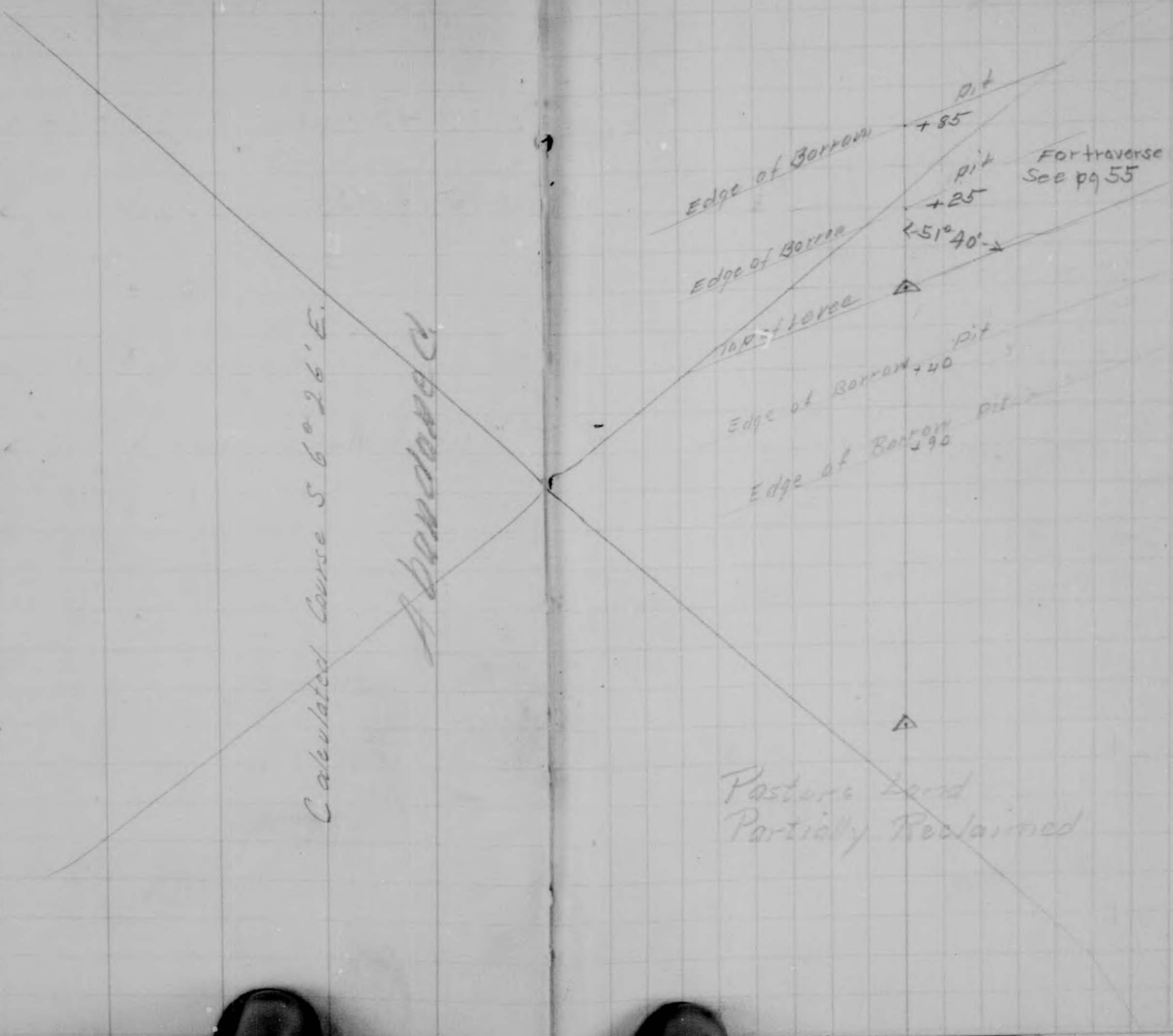
Abandoned

Pasture Land
Partially Reclaimed

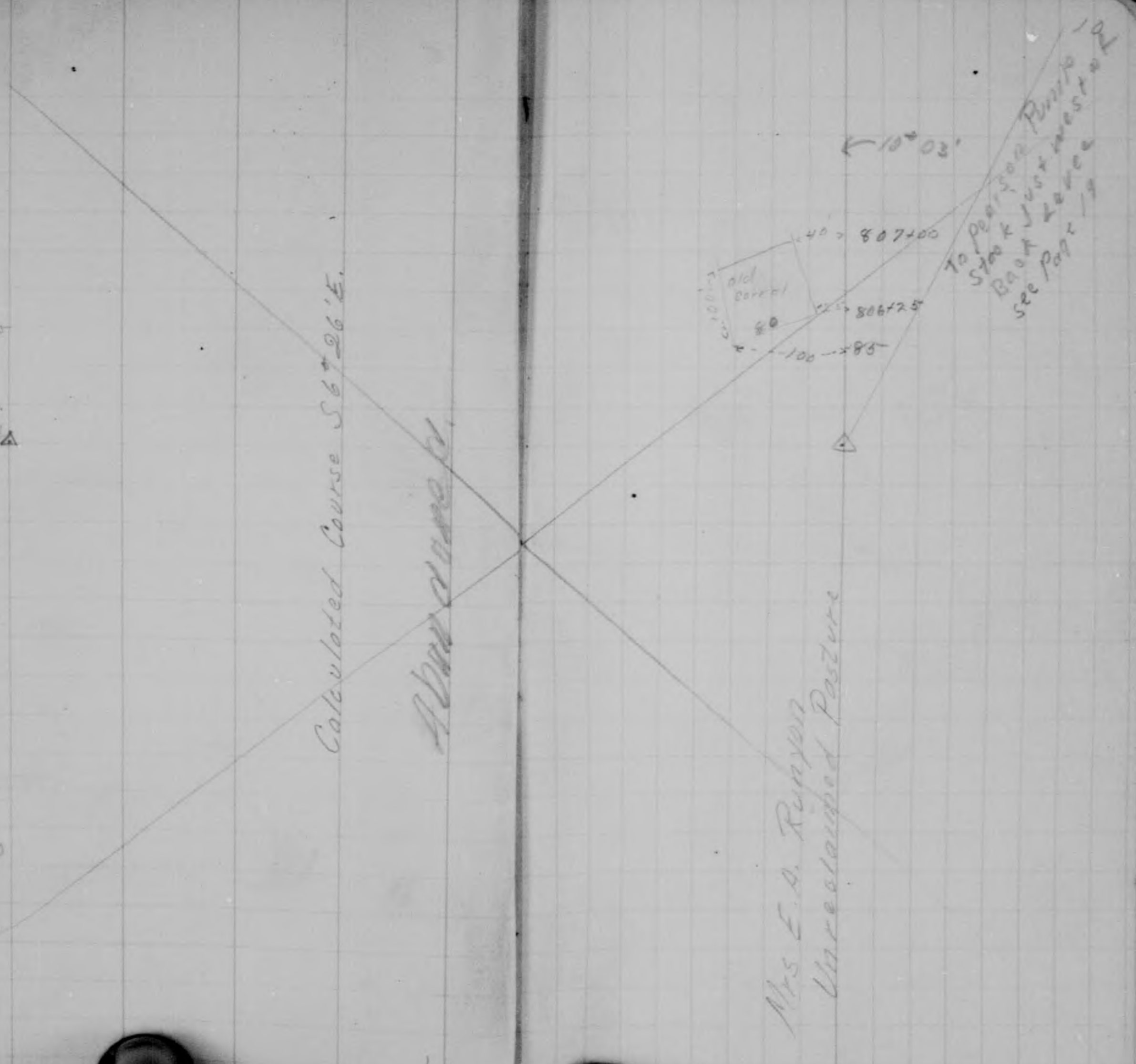
△

T

+50
796
+85
+50
+25
795
+819 △
+50
+40
794
+90
+50
793
+50
792
+50
791
+933 △
+50
790
+50
789
+50
788
+50



T	T
+	+50
79	808
	+50
	807
+	+50
795	806 +25
+	+50
+	805
+	+93
79	+50
+	804
	+50
79	803
+	+50
79	802
+	+50
791	801
+	+50
	800
79	+50
+	799
78	+50
+	798
78	+50
+	797



T

+50
820
+50
819
+50
818
+50
817
+50
816
+50
815
+92.2 △
+50
814
+50
813
+50
812
+50
811
+50
810
+50
809

Calculated Course S6°26'E

Abandoned

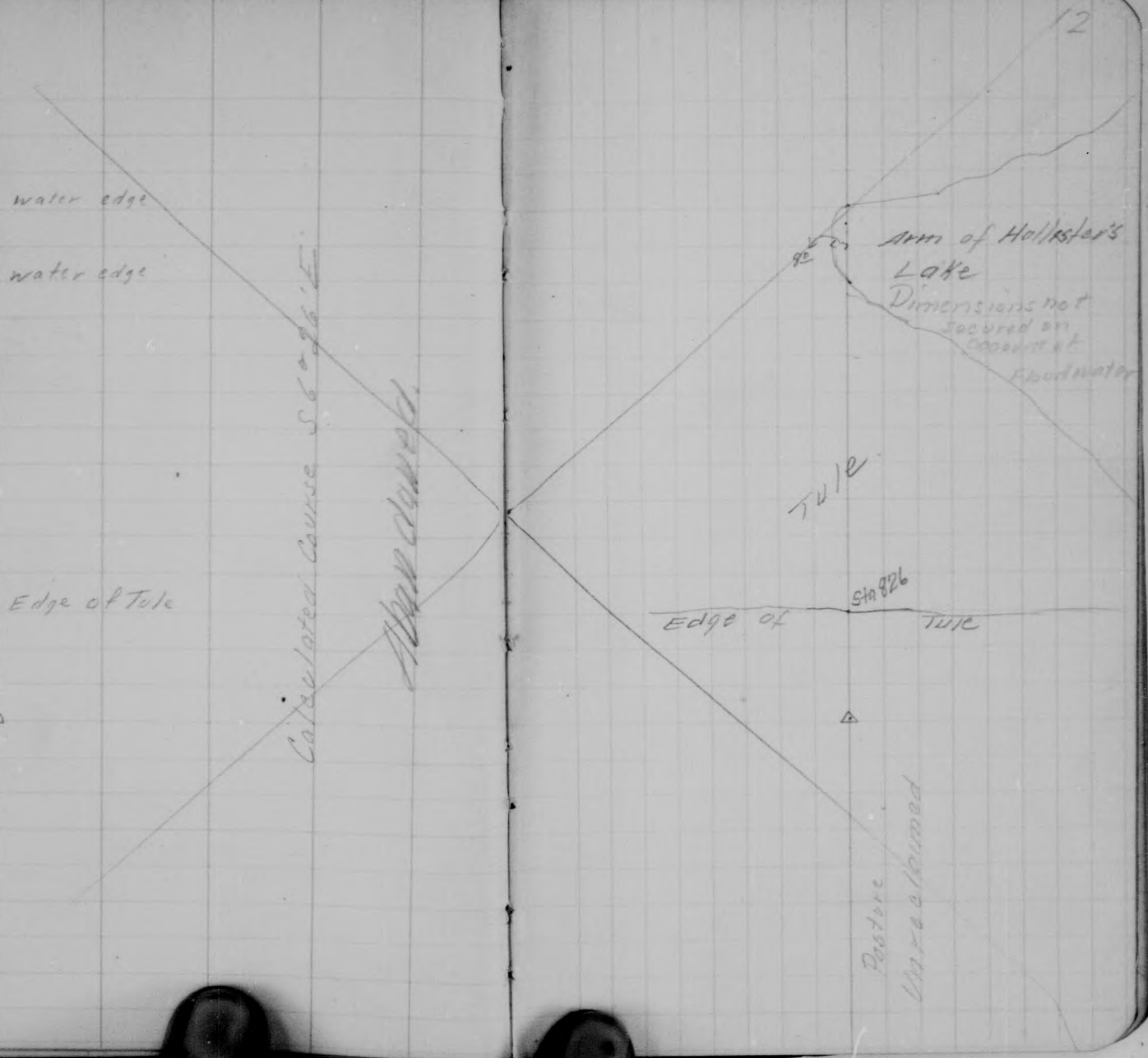
Nov 21 1906

△

Un reclaimed Pasture

0682

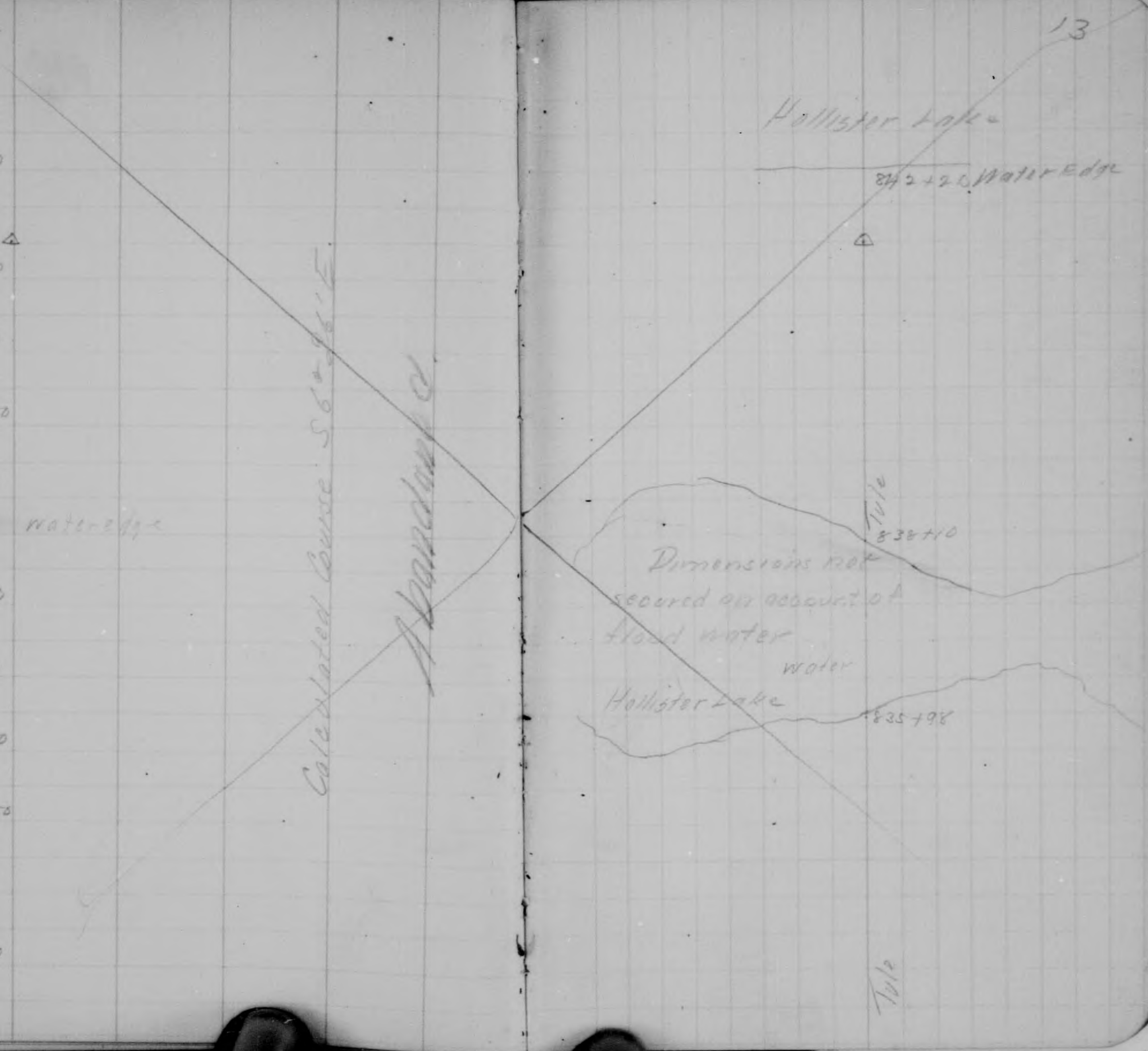
+50	
831	
+75	water edge
+50	
+20	water edge
830	
+50	
829	
+50	
828	
+50	
827	
+50	
826	Edge of Tule
+50	
825	
+93^{3} △	
+50	
824	
+50	
823	
+50	
822	
+50	
821	


Calculated Course S 6° 26' E
Abandoned
Arm of Hollister's Lake
Dimensions not secured on account of floodwater
9°
Tule
Sta 826
Edge of Tule
Pasture
Unreclaimed

0683

T

843
+50
842
+93.9
+50
841
+50
840
+50
839
+50
+10 water edge
838
+50
837
+50
836
+50
835
+50
834
+50
833
+50
832



+
855
+50
854
+50
853
+50
852
+50
851
+50
850
+95
+50
849
+50
848
+50
847
+50
846
+50
845
+50
844
+50

Calculated Course S 6° 26' E

Abandoned

Nov 23 1906

Water
Hollister [illegible]

+45 Edge of water

Tule

+95 Edge of Tule

Water depth 3' to 5'.

water was chained across by setting 2x4 posts every 50' and chaining to brads set in top of posts

T

866
+88
+50
865
+50
864
+50
863
+613 △
+50
862
+50
+30
861
+50
860
+50
859
+50
858
+30
857
+50
856
8+50

Calculated Course S 6° 26' E

Abandoned

15

Nov 24 1906

Hollister Lake

water

+88 water Edge

△ Tule Island

approx circular

+30 Edge of tule

+50 Edge of weeds

Hollister Lake

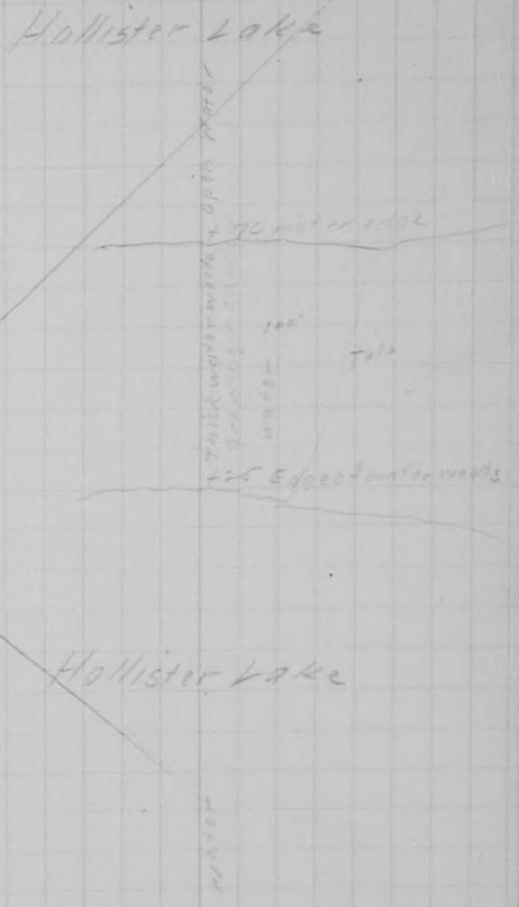
water

T
878
+50
877
+50
876
+70
+50
875
+50
874
+50
+25
873
+50
872
+50
871
+50
870
+50
869
+50
868
+50
867
+50

Calculated Course S 6°26' E

Abandoned

16

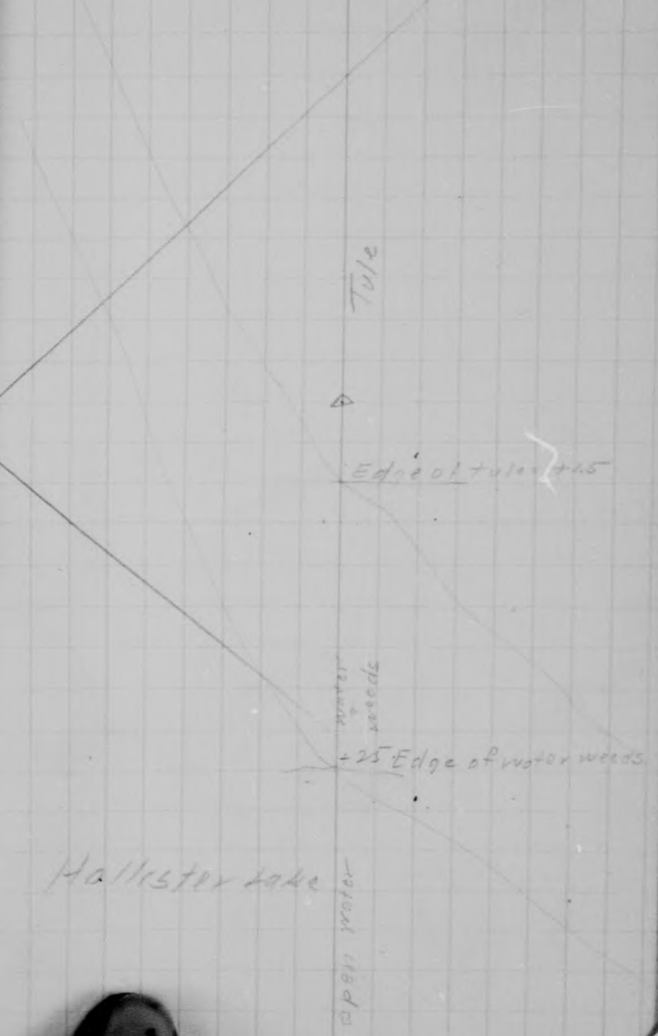


T
887
+50
888
+50
887
+50
886
+50
885
+63½ △
+50
+15
884
+50
883
+50
882
+50
+25
881
+50
880
+50
879
+50

Calculated Course S 6° 26' E

Abandoned

Nov 26 1906



T

901
+50
900
+60
899
+50
898
+50
897
+50
896
+50
895
+61^{7} △
+50
894
+50
893
+50
892
+50
891
+50
890
+50

Calculated Course S 5° 26' E.

Abandoned

18

Tule

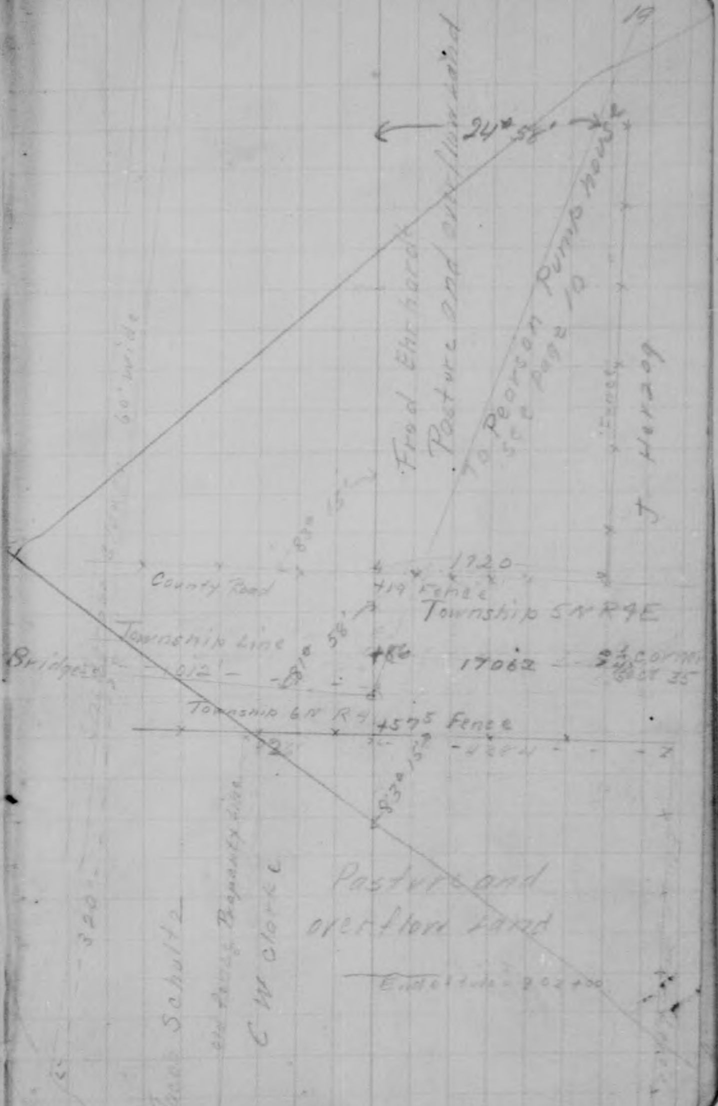
△

Tule

T
+50
911
+50
910
+50
909
+50
908
+50
907
+50
+19
906
+86
$+69^{2}$ △
$+57^{5}$
+50
905
+50
904
+50
903
+50
902
+50

~~Calculated Course S 56° 06' E~~

~~Abandoned~~

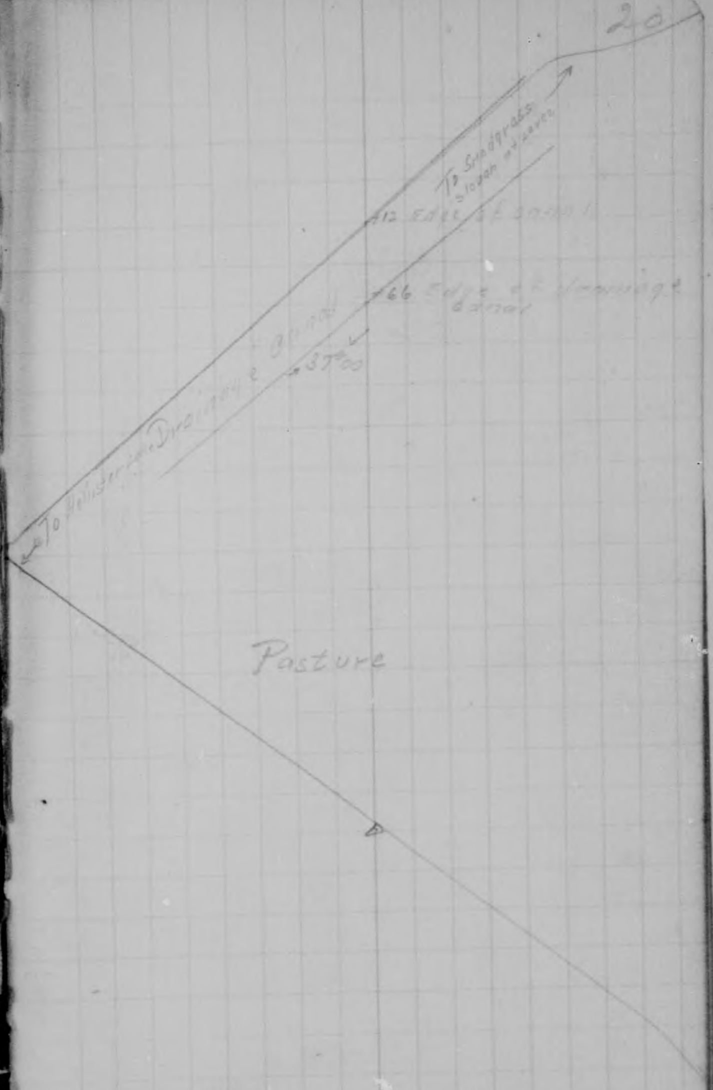


T

922
+50
+12
921
+66
+58³ Δ
+50
920
+50
919
+50
918
+50
917
+50
916
+50
+20³ Δ
915
+50
914
+50
913
+50
912

Calculated Course S 6°26' E

Abandoned


To Snodgrass Slough at levee
+12 Edge of sand
+66 Edge of drainage canal
To Hollister's Drainage Canal
+37⁰⁰
Pasture

T

932

+50

+06

931

+59

+50

+192

930

+87

+30

+46

929

+30

928

+50

927

+50

926

+50

925

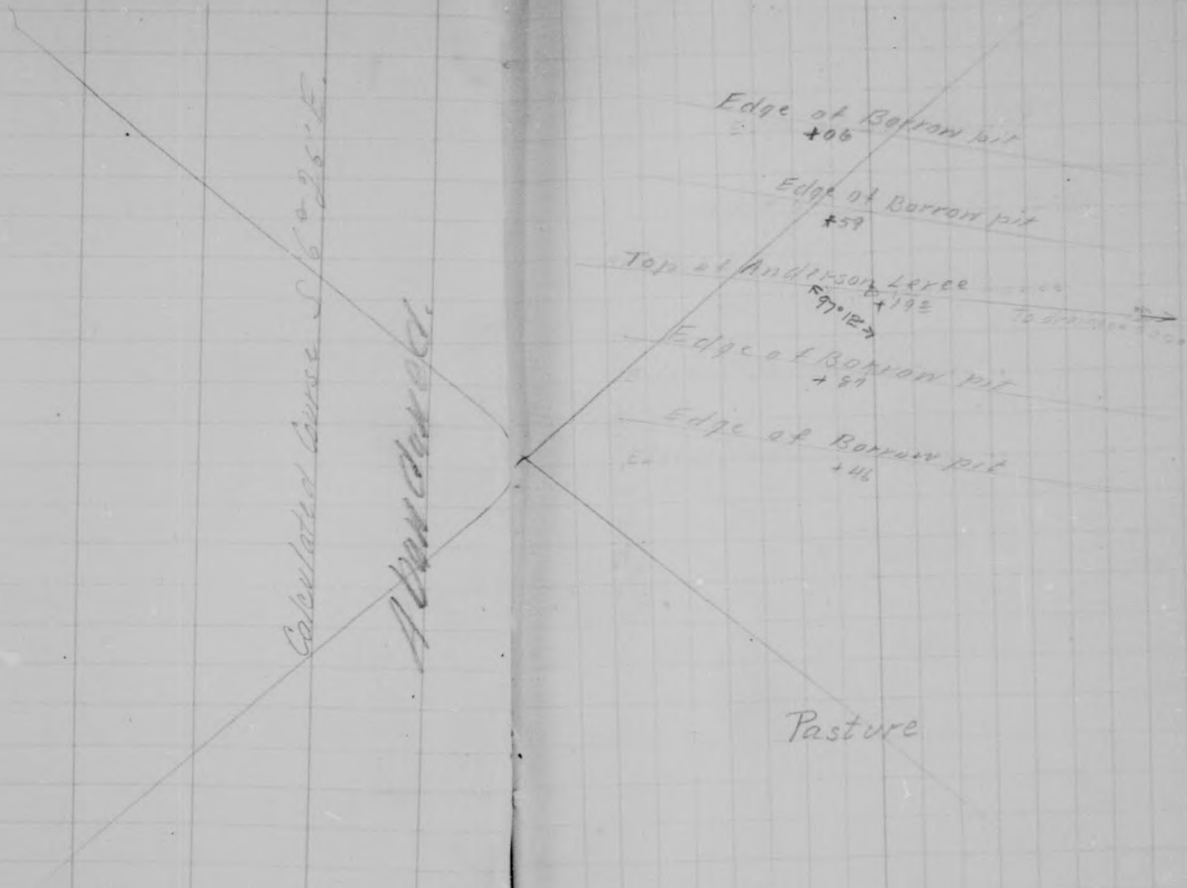
+50

924

+50

923

+50



Calculated Course S 6° 26' E

Abandoned.

T

+908 △
+50
943
+50
942
+50
941
+50
940
+50
939
+50
938
+50
937
+50
936
+50
935
+50
934
+542 △
+50
933
+50

Calculated Course S 56° 26' E

Abandoned.

22

Nov 27 1904

△

Tule and over flow Land

△ Edge of Tule

T

+50
955 △
+50
954
+50
953
+50
952
+50
951
+50
950
+50
949
+50
948
+50
947
+50
946
+50
945
+50
+27 △
944

Calculated Course S 56° [illegible] E

Abandoned

At this point error in △ alignment of the Plane hubs was discovered and all the Plane hubs were abandoned

Tule and overflow land

T

968
+50
967
+50
966
+10
965
+50
964 △
+50
963
+50
962
+50
961
+50
960
+50
959
+50
958
+50
957
+50
956

Completed Course S 56°36' E

Abandoned.

24

△

Tule and overflow Land

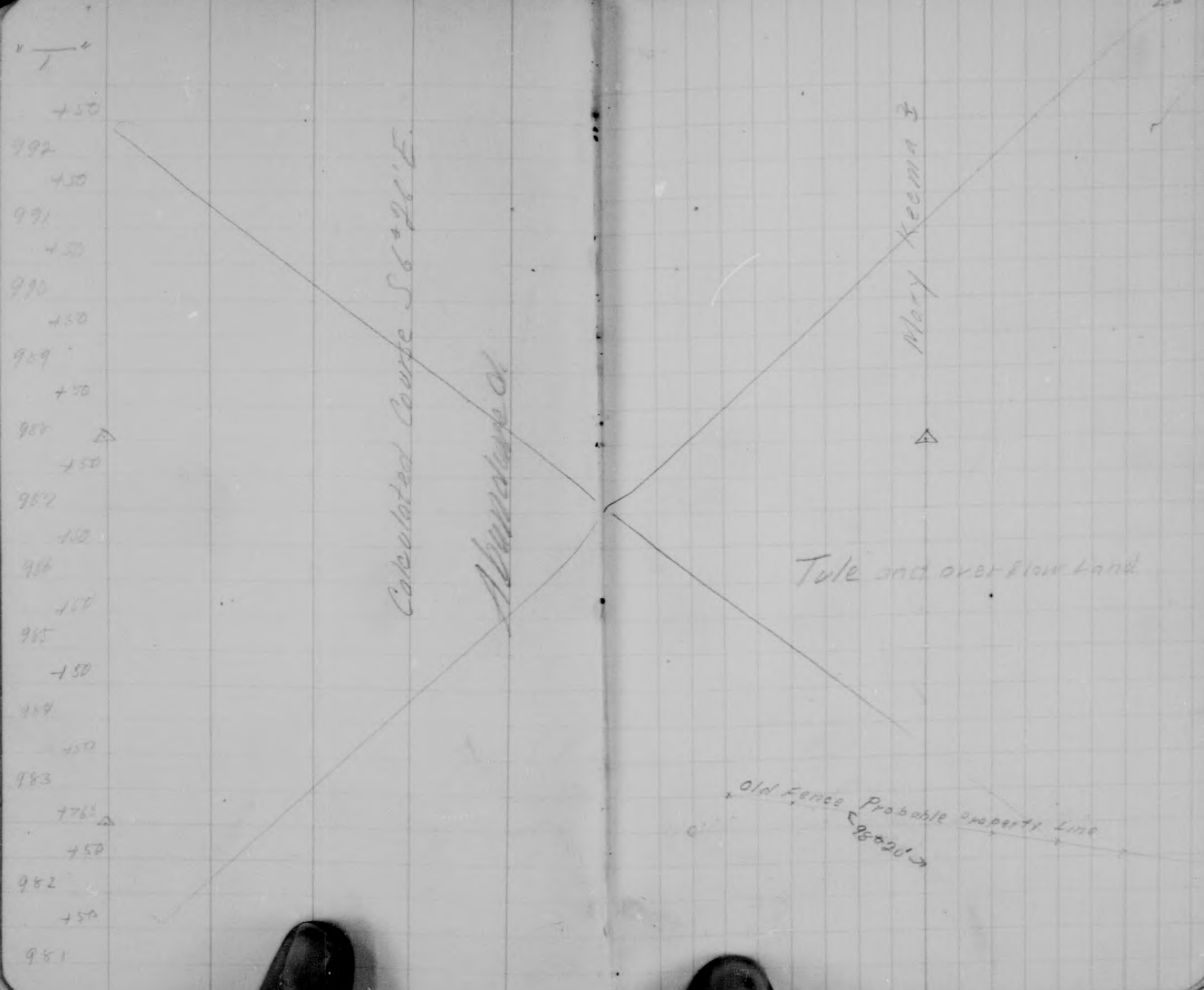
T

+50
980
+50
979
+50
978
+50
977
+50
976
+50
975
+50
974
+50
973
+50
972
+50
971
+50
970
+50
969
+50

Calculated Course S61°28'E

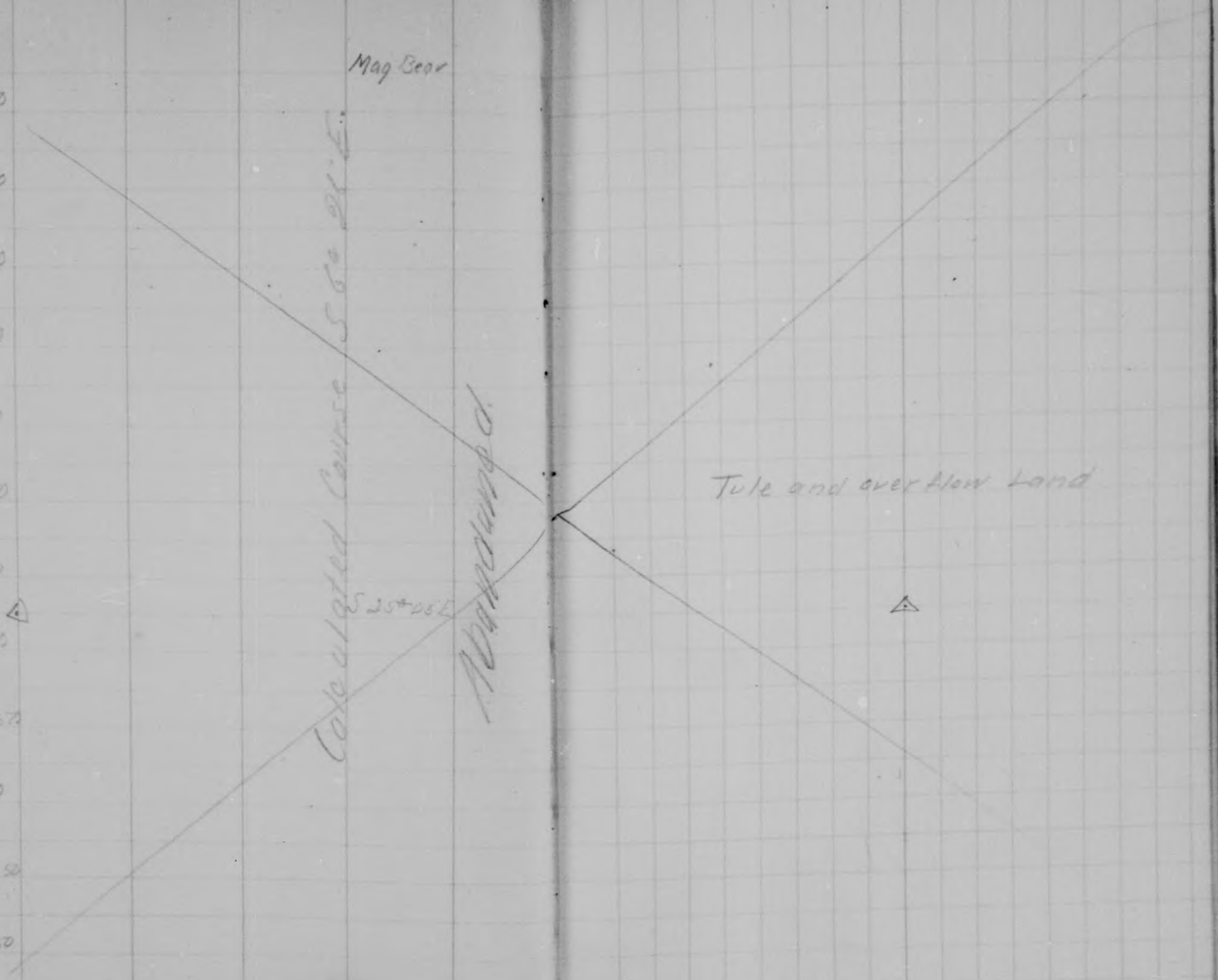
Abandoned

Tule and overflow Land


1
+50
992
+50
991
+50
990
+50
989
+50
988
+50
987
+50
986
+50
985
+50
984
+50
983
+76
+50
982
+50
981
Calculated Course S6°26'E
Abandoned Ch.
Mary Keema ?
Tule and over flow Land
Old Fence Probable property Line
98°20'

T"

+50
1004
+50
1003
+50
1002
+50
1001
+50
1000
+50
999
+50
998
+50
997
+50
996
+50
995
+50
994
+50
993



Mag Bear

Calculated Course S 6° 21' E

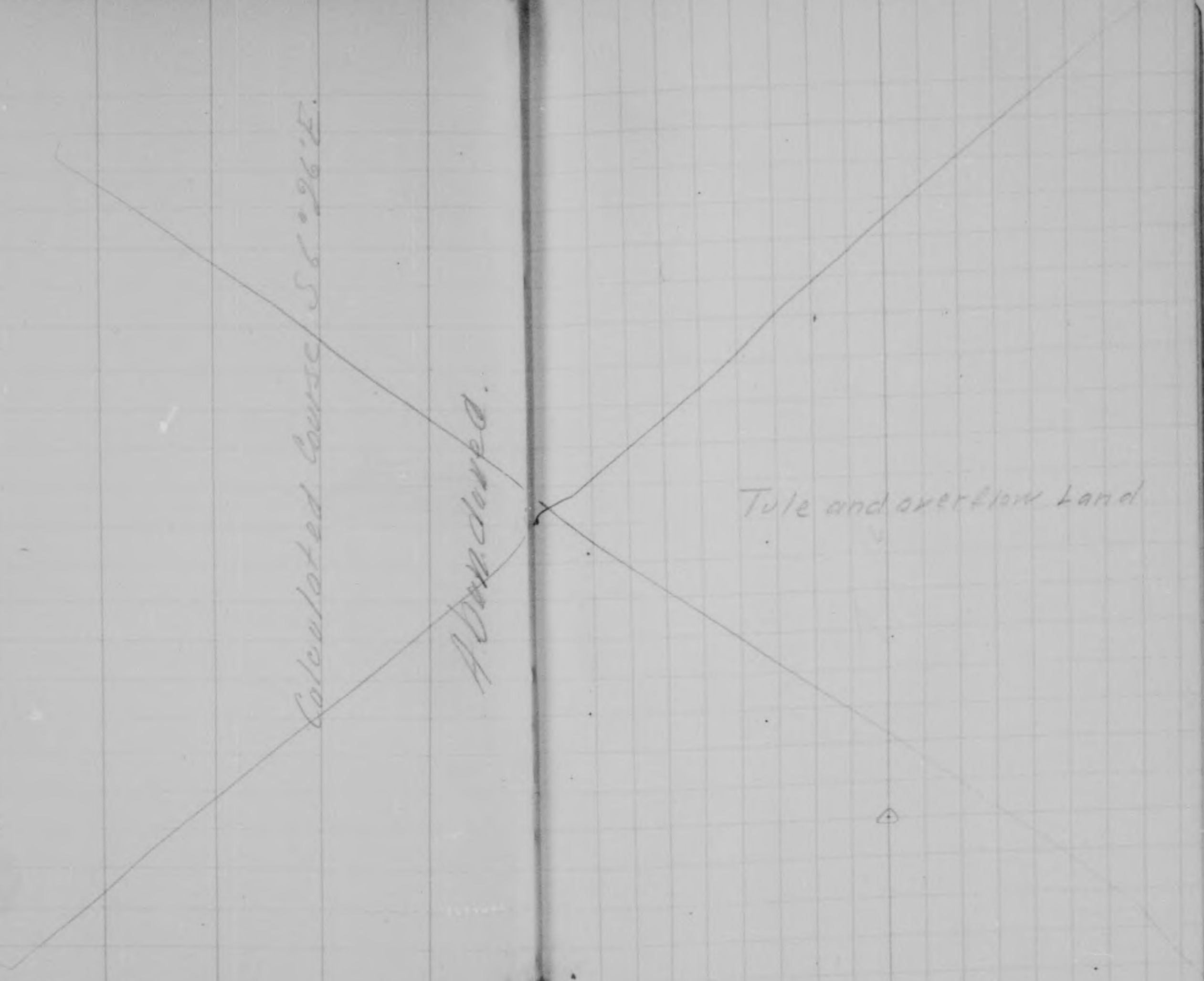
S 25° 06' E

Abandoned

Tule and over flow Land

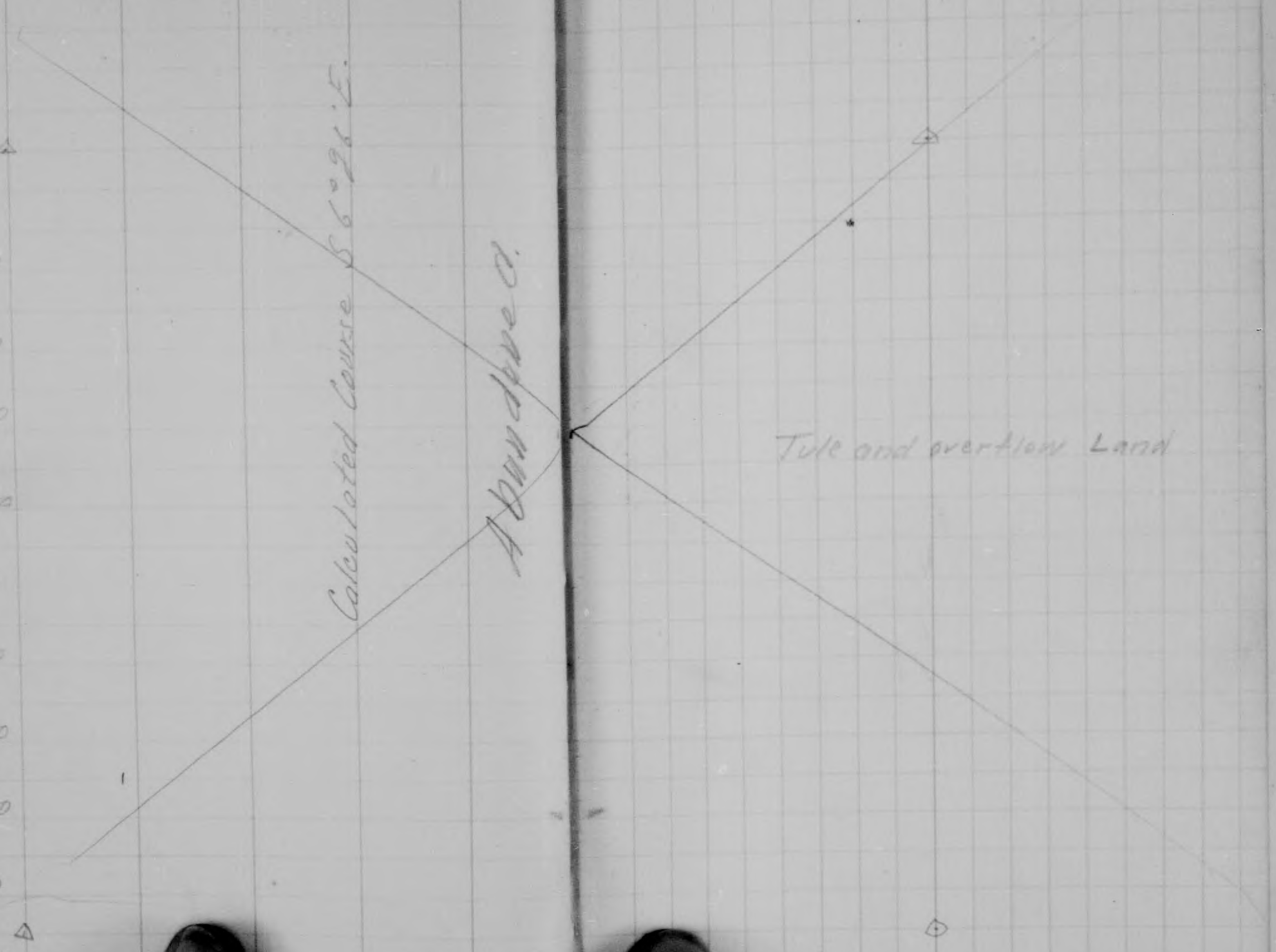
J

1017
+50
1016
+50
1015
+50
1014
+50
1013
+50
1012
+50
1011
+50
1010
+50
1009
+50
1008 △
+50
1007
+50
1006
+50
1005



T

+50
1029
+50
1028
+50
1027
+50
1026
+50
1025
+50
1024
+50
1023
+50
1022
+50
1021
+50
1020
+50
1019
+50
1018
+50



0700

T

1042
+50
1041
+50
1040
+50
1039
+50
1038 △
+50
1037
+50
1036
+50
1035
+50
1034
+50
1033
+50
1032
+50
1031
+50
1030

Calculated Course S 6°26'E

Abandoned

1041 Cr 2 ft [illegible] 50' wide

△

Tule and overflow Land

T

+50
1054
+50
1053
+50
1052
+50
1051
+50
1050
+50
1049
+50
1048 △
+50
1047
+50
1046
+50
1045
+50
1044
+50
1043
+50

Calculated Course S62°26'E

Abandoned.

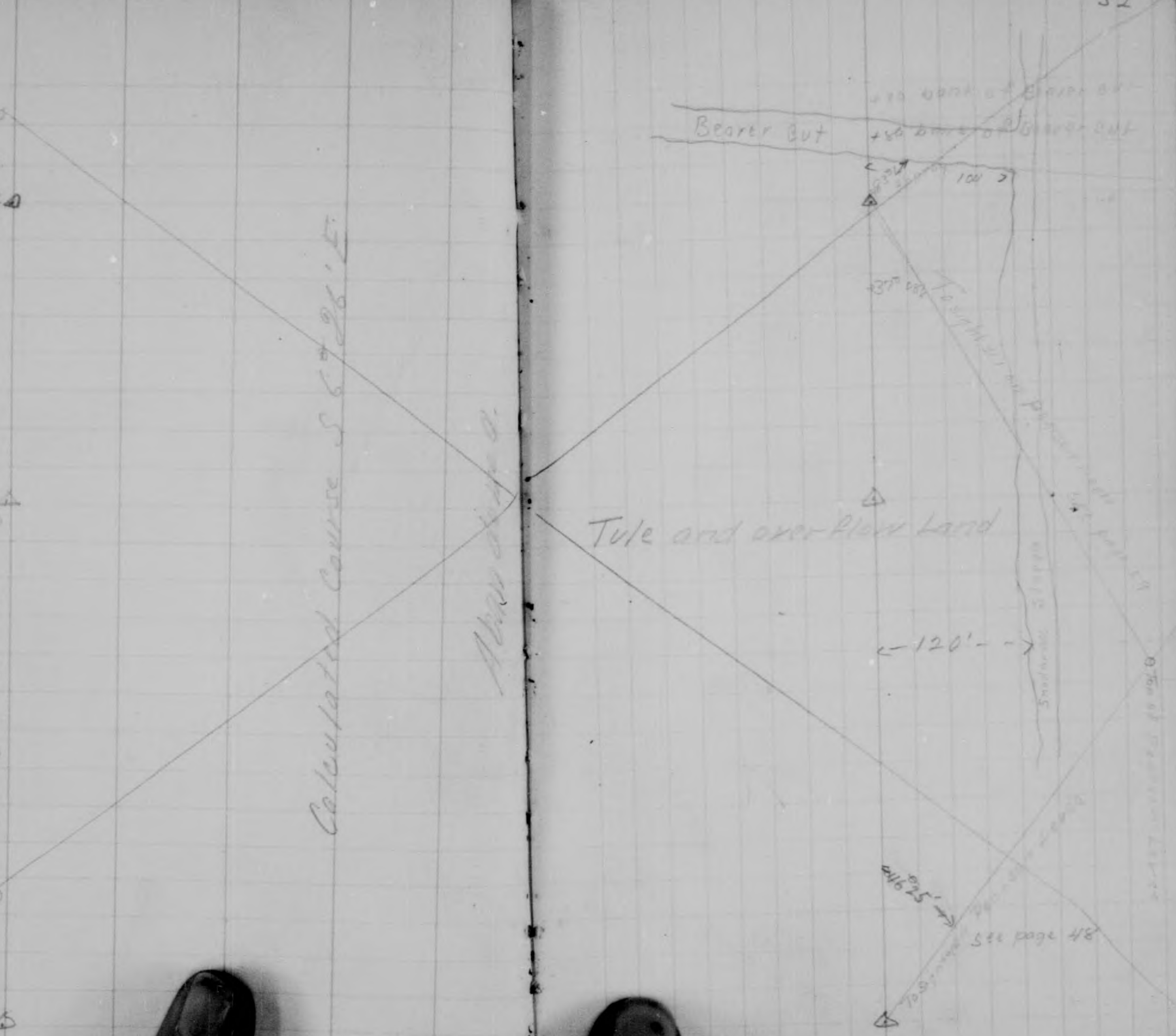
Dec 1st 1906

Tule and overflow Land

△

J

+90
+80
+72
+50
1065
+50
1064
+50
1063
+50
1062
+50
1061
+50
1060
+50
1059
+50
1058
+50
1057
+50
1056
+50
1055



T

1078
+50
1077
+50
1076
+50
1075
+50
1074
+50
1073
+50
1072
+50
1071
+50
1070
+50
1069 △
+50
1068
+50
1067
+50
1066

Calculated Course S 6° 26' E

Abandoned.

33

Dec 2nd 1906

T
1090
+50
1089
+50
1088 △
+50
1087
+50
1086
+50

Chaining continued for semitangents and P.I. No stakes set

Alignment notes continued on Page 36

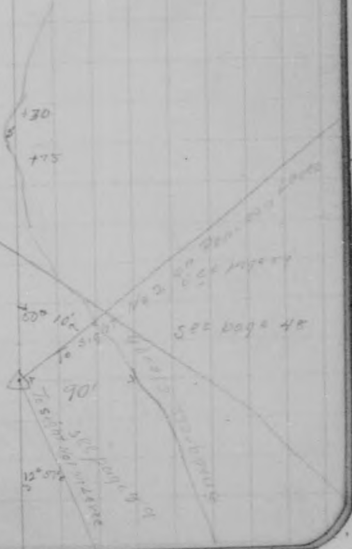
1085
+50
1084
+50
1083
+50
1082
+50
1081
+50
1080 △
+50
1079
+50

△ P.S.t.

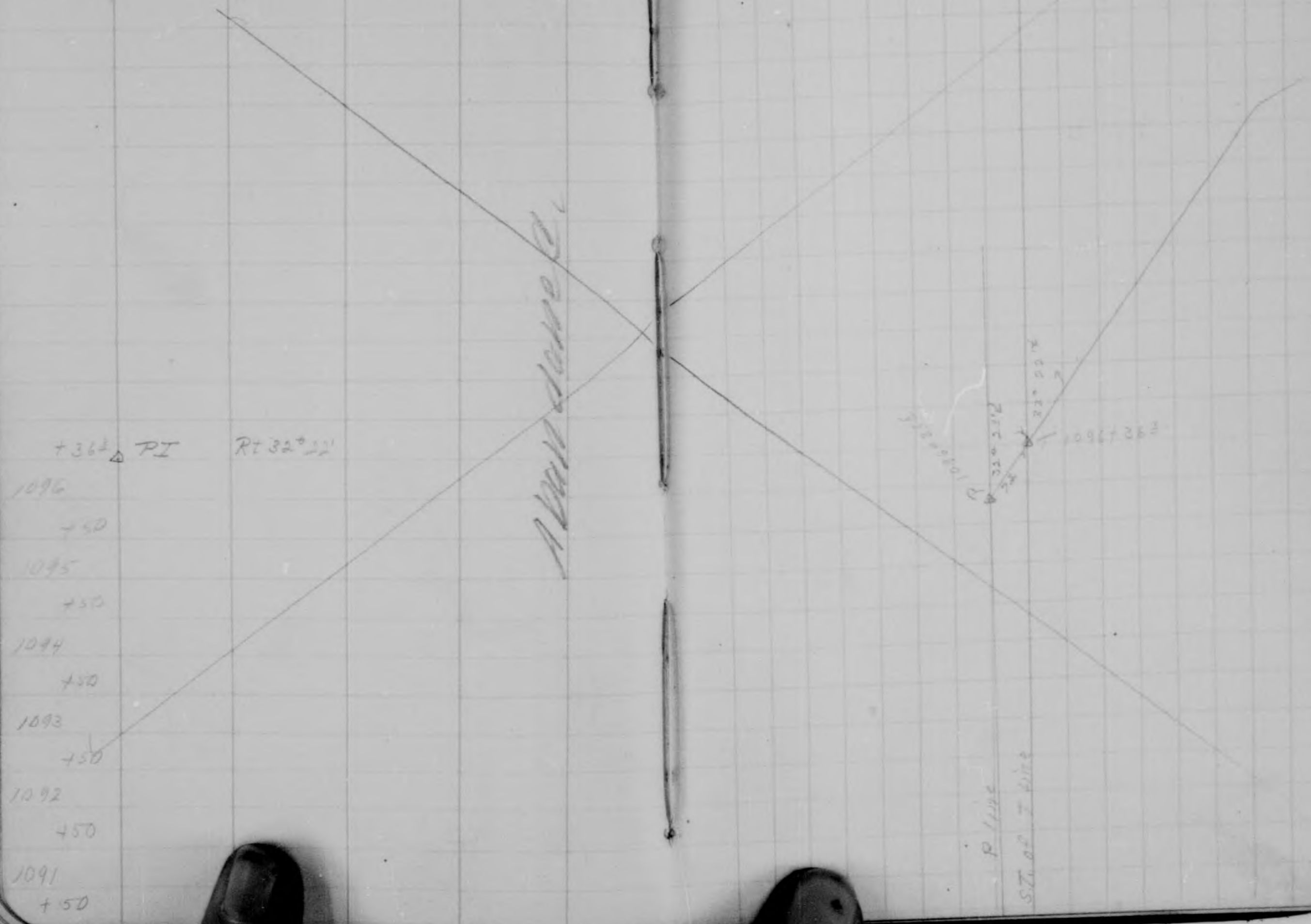
Calculated Course S6°36'E

Abandoned

Tule and overflow Land



T



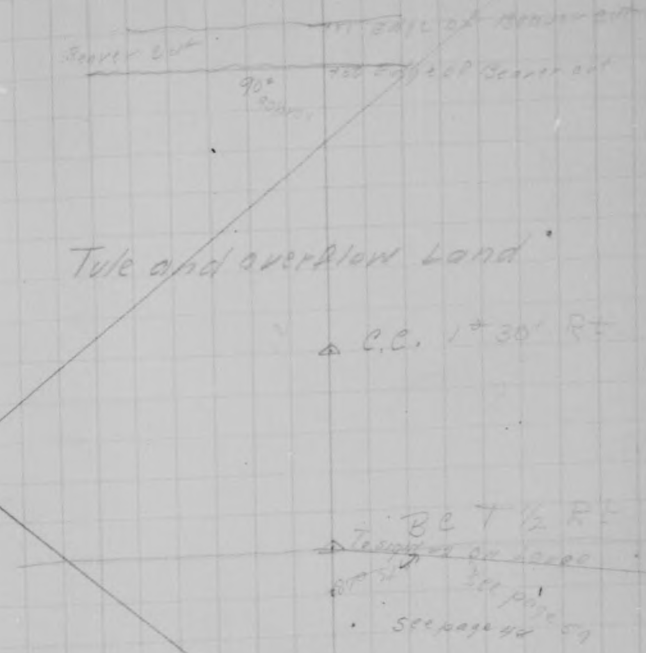
Abandoned.

T	Def L.	Def R.	Mag C.	Calc. C.
481				
450		2° 15'		
1089		1° 52½		
450		1° 30'		
1088		1° 07½		
450		0° 45'		
1087		0° 22½		
450		0 00		
1086+022 ⊙	1° C.C 07	1° 00 36' Rt 34½		
722		00° 18¾		
422		00° 10½		
1085+122		00° 06¾		
822		00° 02¼		
1084+522 △	B.C. T ½ Rt		S 25° 05'E	S 6° 26'E

1° 07½° in Taper — Semi Tangent = 1163.63

Stationing of Curve continued

Abandoned

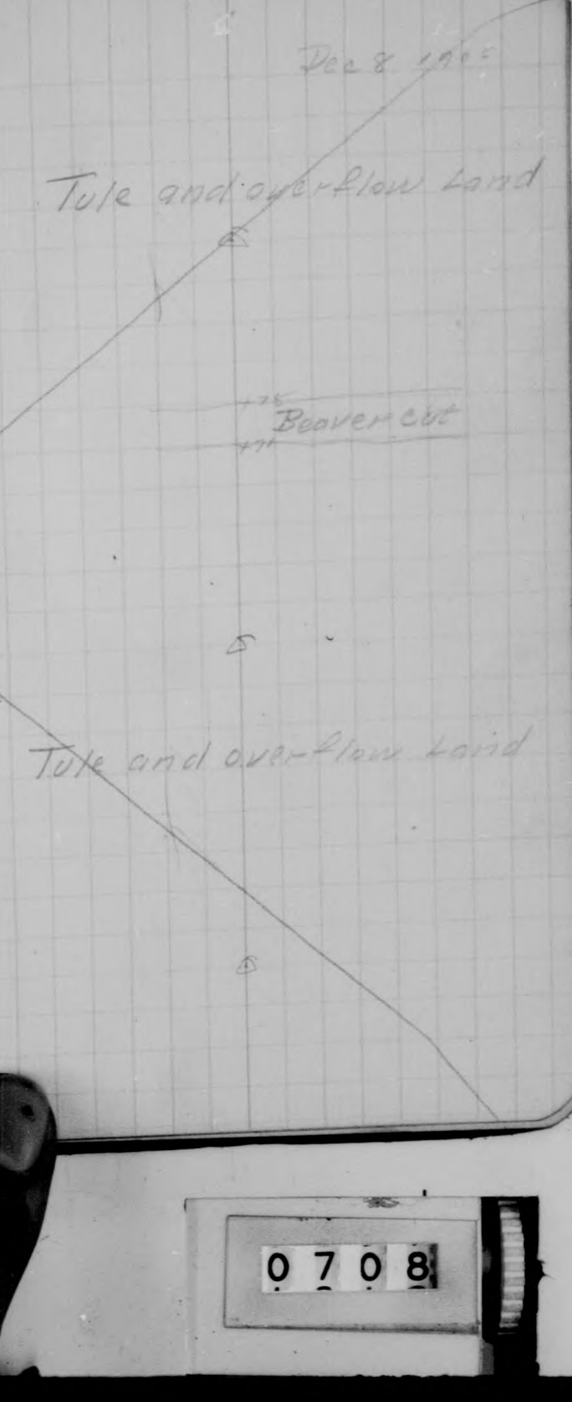


T	Def. L.	Def. R.
1100		1° 07½
+50		0° 45'
1099		0 22½
+50	△ 3° 00'	3° 00
1098		2° 37½'
+50		2° 15'
1097		1° 52½
78		
+71		
+50		1° 30'
1096		1° 07½'
+50		0° 45'
1095		0° 22½
+50	△ 3° 00	3° 00
1094		2° 37½'
+50		2° 15'
1093		1° 52½
+50		1° 30'
1092		1° 07½
+50		0° 45'
1091		0° 22½
+50	△ 3° 21¼'	3° 00'
1090		2° 37½

Intersection Angle = 32° 22' Length of Main curve = 200ft

Abandoned.

Dec 8 1905



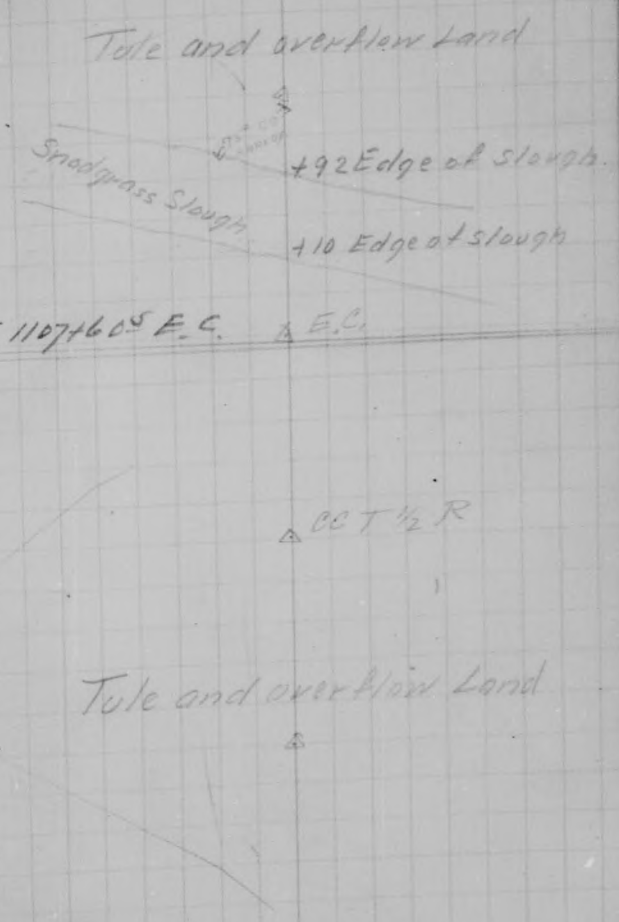
Transit Notes copied into Transit Book #16, page 61. Oct. 14, 1911. H.V.M.

T	Def L	Def R	Mag C.	Calc C.
+50				
+03² Δ				
1109				
+92				
+50	Stake not set.			
+10				
1108			S 7° 30' W	S 25° 56' W
1107 +60⁵ Δ				
+38⁵				
1107+00⁵				
+70⁵				
+40⁵				
+10⁵ Δ	1° 34½'	1° 34½'		
1106		1° 30'		
+50		1° 09½'		
1105		0° 43'		
+50		0° 22½'		
1104 Δ	4° 09½'	4° 09½'		
+50		3° 45'		
1103		3° 22½'		
+50		3° 00		
1102		2° 37½'		
+50		2° 15'		
1101		1° 52½'		
+50	1° 30'	1° 30'		

E.C. D 1108+72² Δ on tan calc. = T 1107+60⁵ E.C.

CC T ½ R

Abandoned

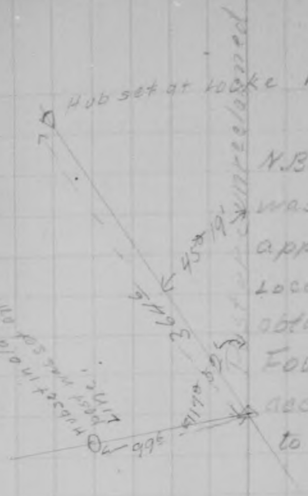


1120
+50
1119
+50
1118
+50
1117
+78.5 △
+50
1116
+50
+05
1115
+50
1114
+50
+45
1113
+50
1112
+50
1111
+50
+15.6 △
1110

Calculated Course S 25° 52' W

Copied into Transit Book #16

Hub set at Locke Vanlobensels Corner.


Hubset in old hole where post was set on Locke Vanlobensels Line.
45° 19'
364.6
1117+82.5
99.5

N.B. As this corner was gone, the approximate location was obtained from Mr. Fountain, but not accurately owing to high water

+05 Water edge

Slough approximately parallel to Snodgrass Slough

+45 water edge

Low marshy Ground

△ End of tule

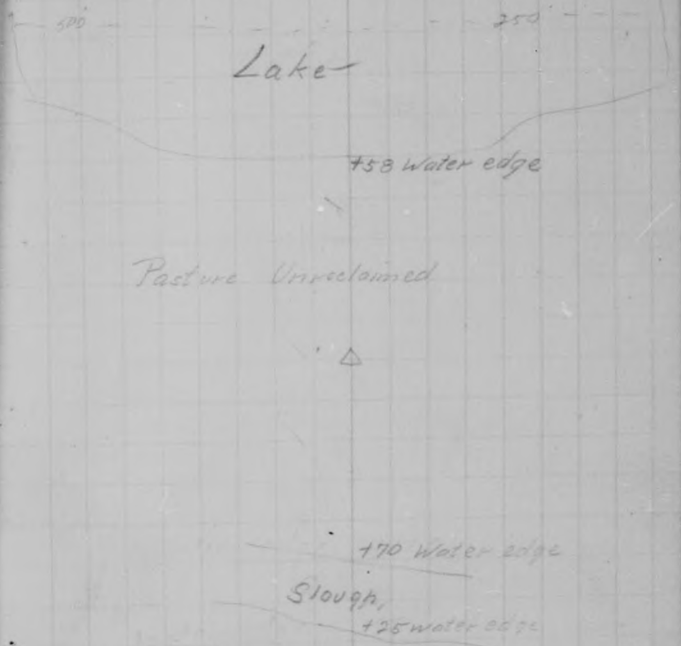
T

+50
1130
+50
1129
+58
+50
1128
+50
1127
+50? △
+50
1126
+30
1125
+70
+30
+25
1124
+50
1123
+50
1122
+50
1121
+50

Calculated Course S 25° 56' W

Copied into Transit Book #16

Dec 12 1902



Owing to high water ere the Topography was taken these Lakes and sloughs could not be measured up

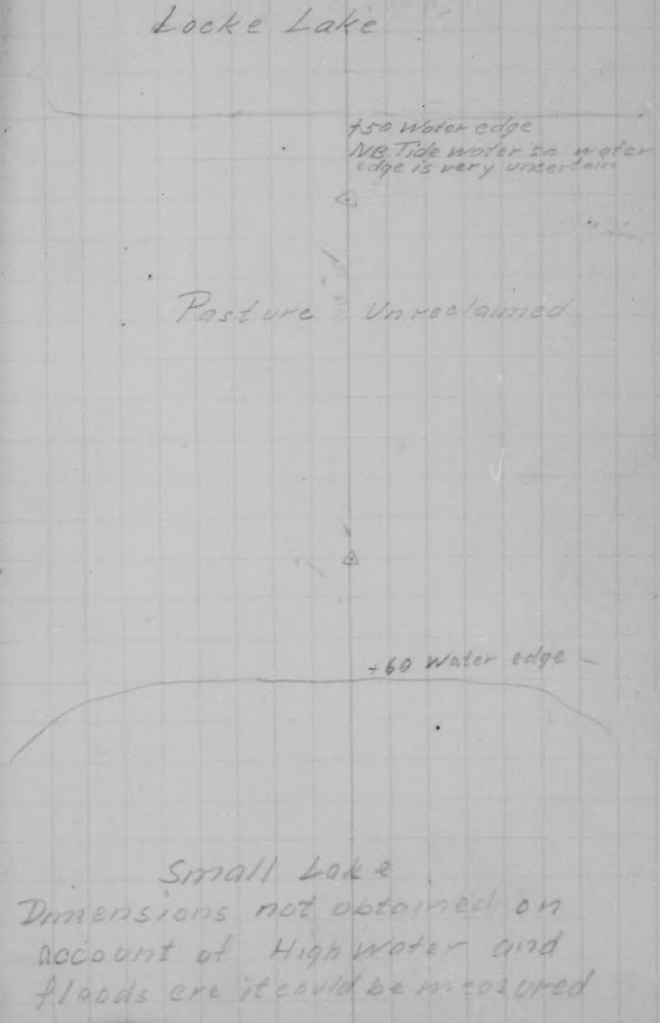
Pasture unreclaimed

T

+50
1141
+50
1140
+81± △
+50
1139
+50
1138
+50
1137
+50
1136
+70± △
+50
1135
+60
+50
1134
+50
1133
+50
1132
+50
1131

Calculated Course S 25°56 W

Copied into Transit Book #16



NB Tide water so water edge is very uncertain

Small Lake
Dimensions not obtained on account of High water and floods ere it could be measured

"T"

1154
+50
1153
+50
1152
+50
1151
+50
1150
+50
1149
+50
1148
+50
1147
+50
1146
+50
1145
+50
1144
+50
1143
+50
1142

Calculated Course S 25° 56' W

Copied into Transit Book #16

42

Locke Lake

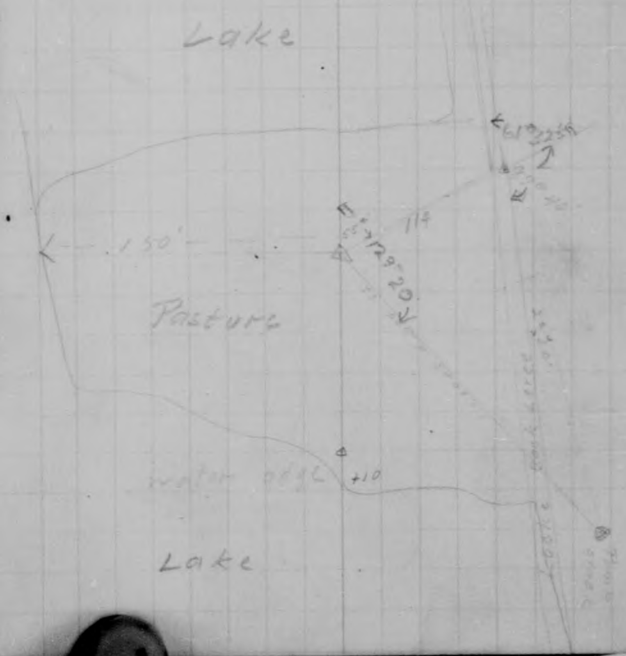
T

1160
+50
11 59
+75 2 △
+50
1158
+50
1157
+50
+21 △
1156
+50
1155
1154+50

Calculated Course S 25° 56' W

Copied into Transit Book #16

N.B. Owing to flood water
it was impossible to
chain the distance from
T 1160 to T 1165 so
the P line chaining from
P 1159 + 39.5 = T 1158 + 75.0 to
P 1168 + 08.2 = T 1167 + 44.7
was taken.



T

+03² Fence

1171

82² △

+74² Fence

+50

1170

+51² △

+50

1169

+50

1168

+50

1167 40² △

1137

+50

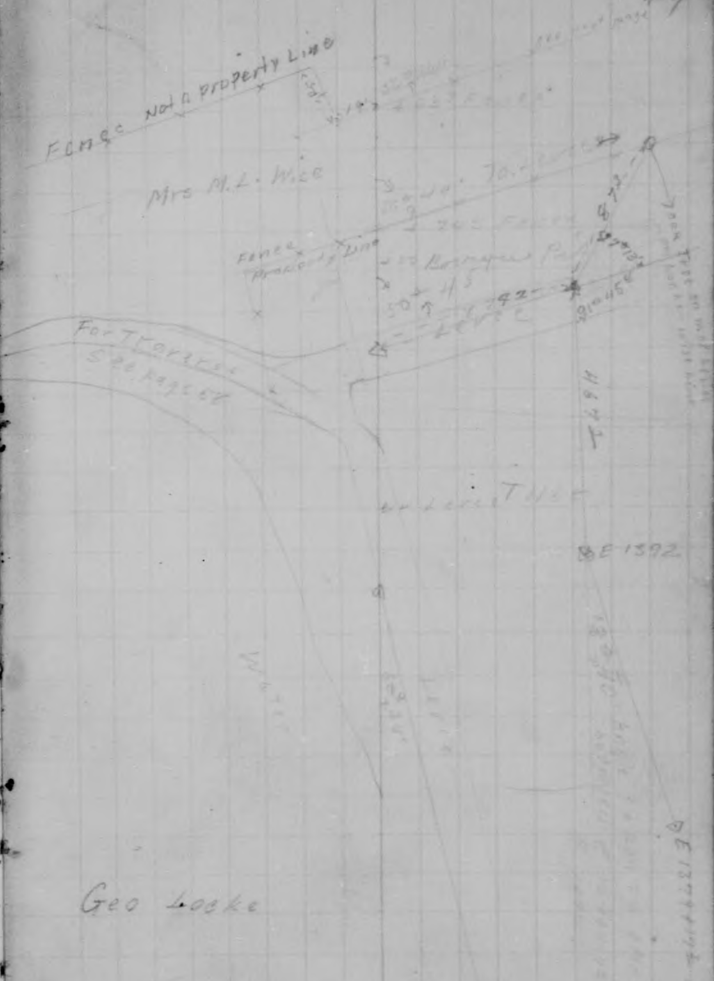
1136

+50

1135

Calculated Course S 25° 52' W

Copied into Transit Book #16

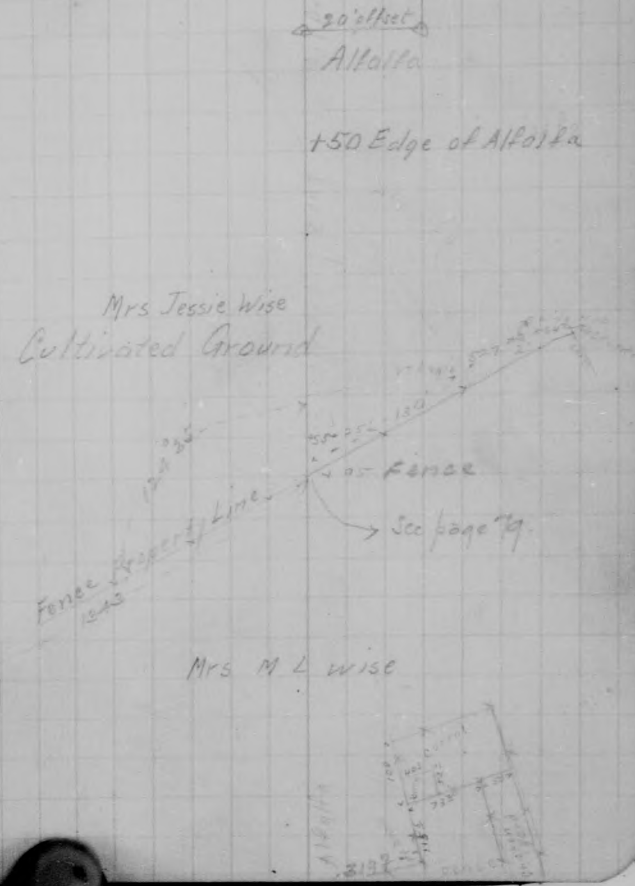


T

+50
1182
+50
1181
+57½ △
+50
1180
+50
1179
+50
1178
+50
1177
+50
1176
+95 Fence
+50
1175
+50
1174
+50
1173
+50
1172
+50

Calculated Course S 25°56'W

Copied into Transit Book #16.

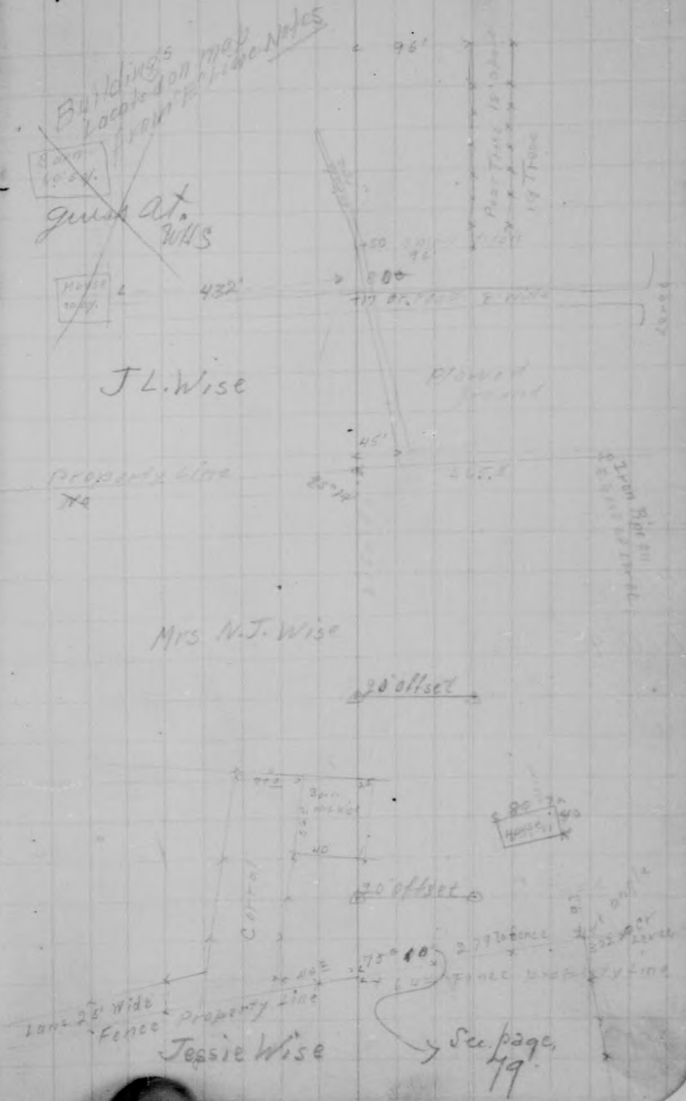


T

+50
1192
+50
1191
+50
+17 Edge of plowed ground
1190
+50
1189
+50
1188
+88 △
+50
1187
+50
1186
+50
+14 △
1185
+91 corner
+50
+ 38 center Barn
+21 △
1184
64 Fay Cr
+50
1183

Calculated Course 25°58' W

Copied into Transit Book #16.



0717

T

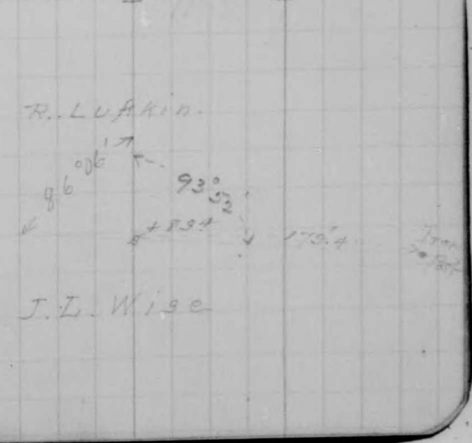
T1197+43.3 = E 1420+45.5 E.C.

1197
+50
1196
+50
1195 +82.7
+50
1194
+50
1193

Copied into Transit Book #16.

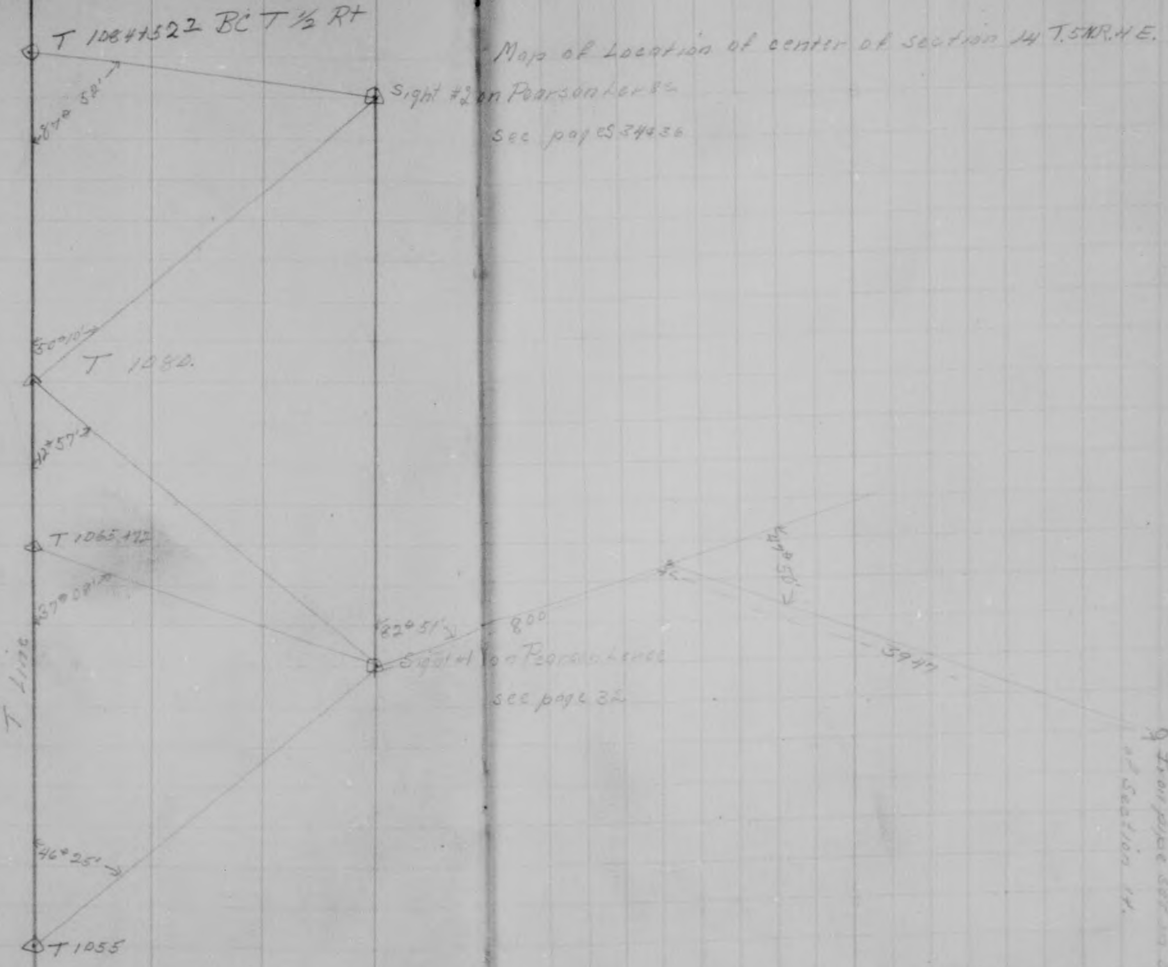
"Calculated Course S 25°56' W."

Station on "P" Line = "P" 1198+07.3 △ 25' offset △



Jan 16 1907

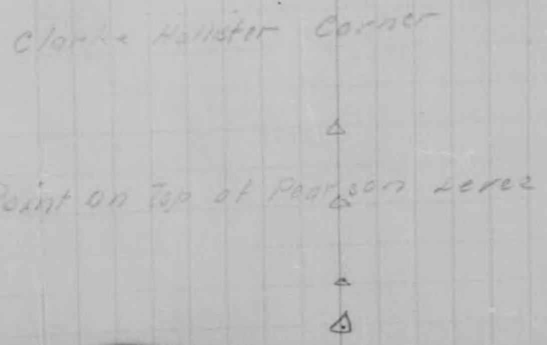
Map of Location of center of section 14 T.5N.R.4E.



Traverse to Locate Clarke, Runyon property Line

Sta	Dist	Angle Lt	Angle Rt	Mag.
sta 4				
sta 3	△ 632.2		105°18'	N71°00E
sta 2	△ 5654.2		74°20'	N34°20W
sta 1	△ 4685.2		96°35'	S71°30W
T 9051693 △				

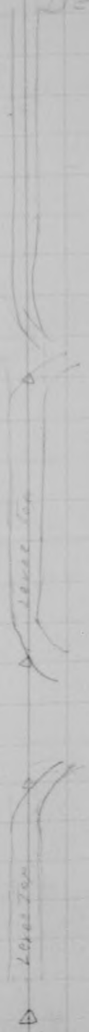
Distance from sta 3 is measured to corner of Clarke and Hollister



Traverse of Runyon Levee to Right of Line

Station	Dist	Angle L	Angle R	Mag Bear
T 2				
11+00				
10+00				
9+00				
8+00 △	2322.7		32° 40	N 72° 15'W
8+00 △				
7+00				
6+00				
5+00				
4+00				
3+00				
2+28 △	572		48° 35'	S 75°W
+28 △				
2+00				
1+00				
0+00	228.			S26° 30W
T794+81± △			51° 40'	

Dec 6, 1926



Traverse of Runyon Levee at "T" 794+10^{5} to Right of Line

+22^{9} End of Levee
31
30
29
28
27
26
25
24
23
22
21
20
19
18
17
16
15
14
13
12+00

0722

Traverse of Runyon Levee to Left of Line

Station	Dist	Angle L	Angle R	Mag Bear
Continue on this course to high ground				
9+79	△	44° 17		N17° 10W
+79	△			
9				
8				
7				
6				
5				
4				
3				
2+00				
1+00				
0+00 =				
T794+61	979	127° 50'		N27° 00E

Top of Levee

Traverse of levee "T" 1169+51 to left of line

	Dist	Def L	Def R	Mag
Continue traverse to back levee [illegible]				
249+	[illegible]	26°45'		N61°20E
249,0 △				
166+8 △	82.2	33°45'		N68°05'E
166.8 △				
0+46.1 △	120.7		81°07'	S65°40E
0+46.1 △				
0+00 = 1168+51 △	46.1	152°01'		N35 20E

0724

Traverse on Pearson Levee from "T" 1080 to E 1353+26' EC" Dec 15 1934
on south of Pearson District

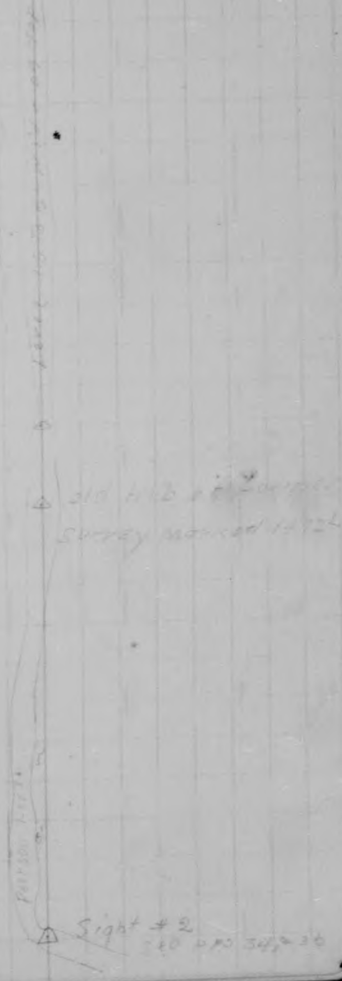
Two points were located on Pearson Levee
by Triangulation from the T line.
See Pages 32, 34, 36 and 48 This book
The instrument was set at sight #2
on Levee for a start on this traverse
using sight #1 for a back sight.
On account of high water, no angles
could be gotten on the T line.

0725

Traverse of Pearson Levee from +1080 to E 1353+26± E.C.

on South of Pearson District

	Dist	Def L	Def R	Mag bear
11+00				
10+00				
9+00				
8+00				
7+00				
6+00				
5+37.3	△ 1662.7		0° 28'	S31° 35'
4+37.3	△			
5+00				
4+00				
3+00				
2+00				
1+00				
0+00	△ 537.3		55° 04'	S 31° 10' W S 24° 00' E



Traverse of Pearson Levee from "T" 1080 to "E" 1353+26± E.C.

On south of Pearson District

	Dist.	Def.L.	Def.R.	Mag.Bear
34				
33				
32				
31				
30				
29				
28				
27				
26				
25				
24				
23				
22+00 △	1979^{2}		0°21'	S32°00W
22 △				
21				
20				
19				
18				
17				
16				
15				
14				
13				
12				

△

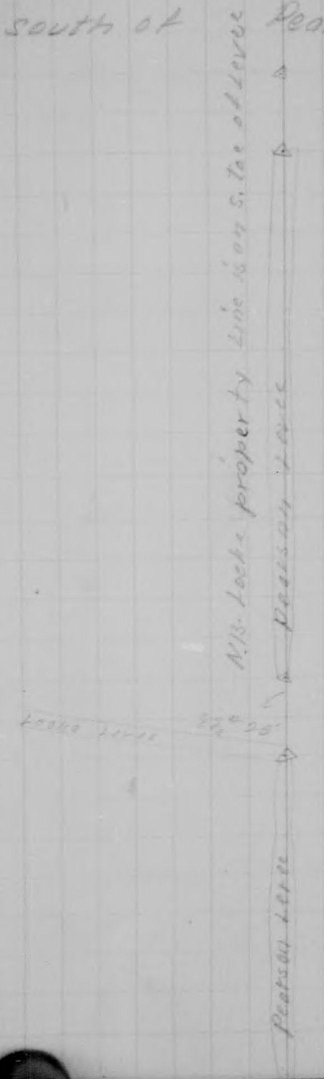
△

Pearson levee

Traverse of Pearson Levee from "T" 1080 to "E" 1353+26.2

		Def L	Def R	Mag
534+68.2 △	943.6	0° 11'		S32°00W
+68.2 △				
53				
52				
51				
50				
49				
48				
47				
46				
45				
44				
43				
42				
41+79.2 △	1188.0		0° 12'	S32°10W
+79.2 △				
41				
40				
39				
38				
37				
36				
35				

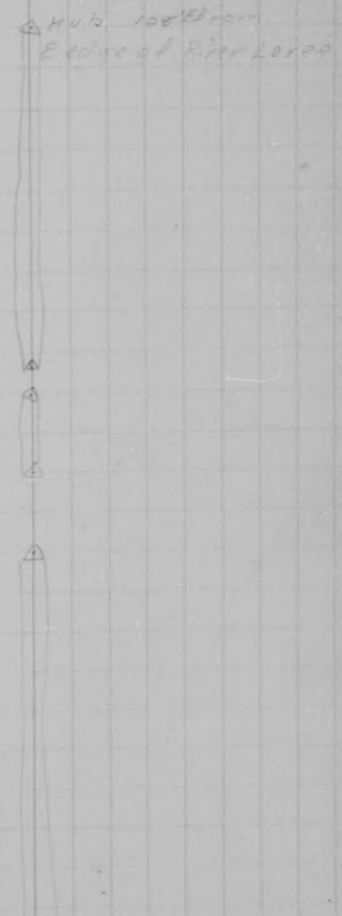
On south of Pearson District



Traverse of Pearson Levee from "T" 1080 to "E" 1353+26± E.C.

On South of Pearson District

		Def L	Def R	
+84.2	△			
72				
71				
70				
69				
68				
67				
66				
65				
7793	△ 7313			
7729	△		2° 00'	S.32° 00 W.
64				
63+11.5	△ 161.1	2° 02'		S.30° 00 W.
63+11.6	△			
63				
62				
61				
60				
59				
58				
57				
56				
55				
54				



Traverse of Pearson Levee from "T" 1080 to "E" 1353126

Ref L Def R Mag

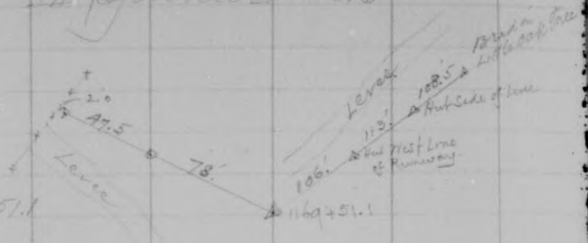
On South of Pearson District

E135 3+126 =	BC 0° 30' L			
+14² △				
75				
74				
73				
72+04² △	309E		62° 45'	N 85° 15 W

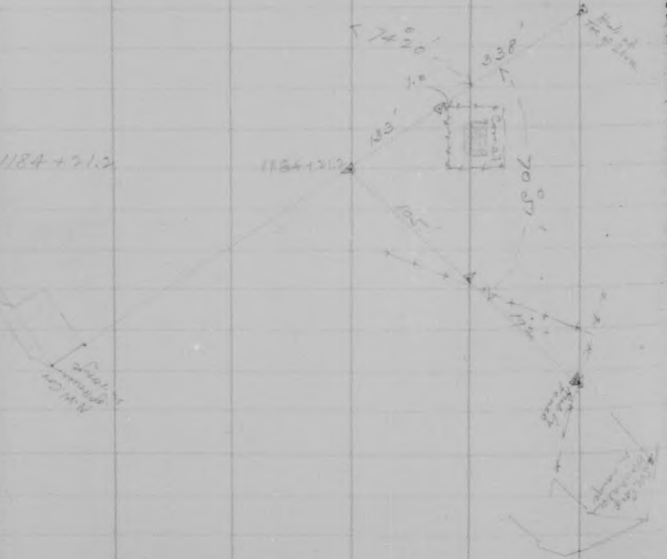
T LINE

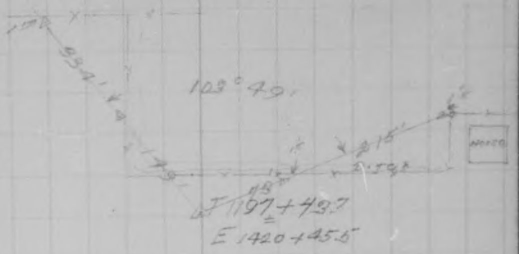
Reference Points

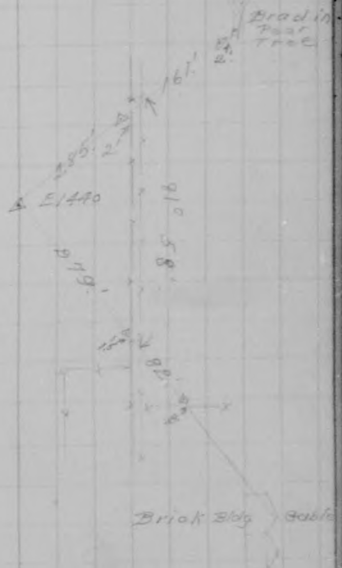
1169+51.1



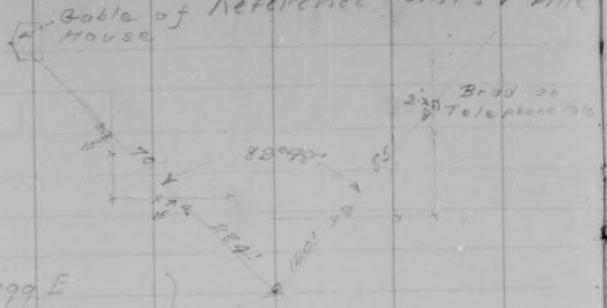
1184+21.2



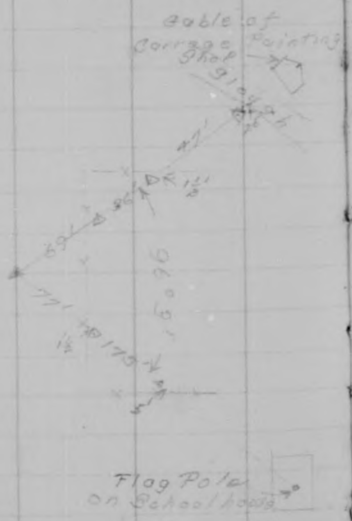




Reference Points T Line

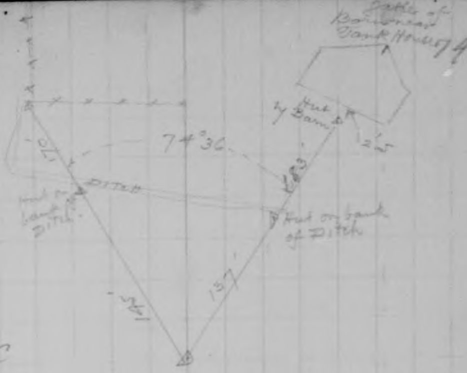


1448+99 E
1448+99 E9 Pt. on Tan.



E9
1453+01.8 B.C. 0°30' R

E9 1459+30.1 EC



0732

Feb 7/07

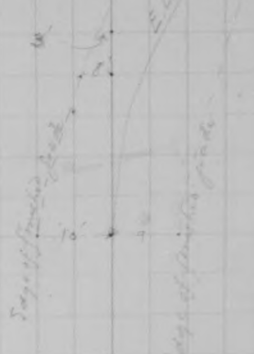
"S" LINE for Spur

1172

1171

1170

1169+66.5 S. LINE △ on Tan:
E1394+09 P.t on 1°30' Curve



"S" LINE for Spur.

Sta.

+84

+54 T.C 1°30'

1177+24.05 BC T.3 △ 25' offset on Left

1175+56 △ 25' offset on Left

1175+41 House

1175+03.6 House

1174+79.9 EC. △

+49.9

1174+19.9 CC T.3 L △ 5°23½

1174 4°38.7

+50 2°46.2

T.C 10°47

L.C 123.7

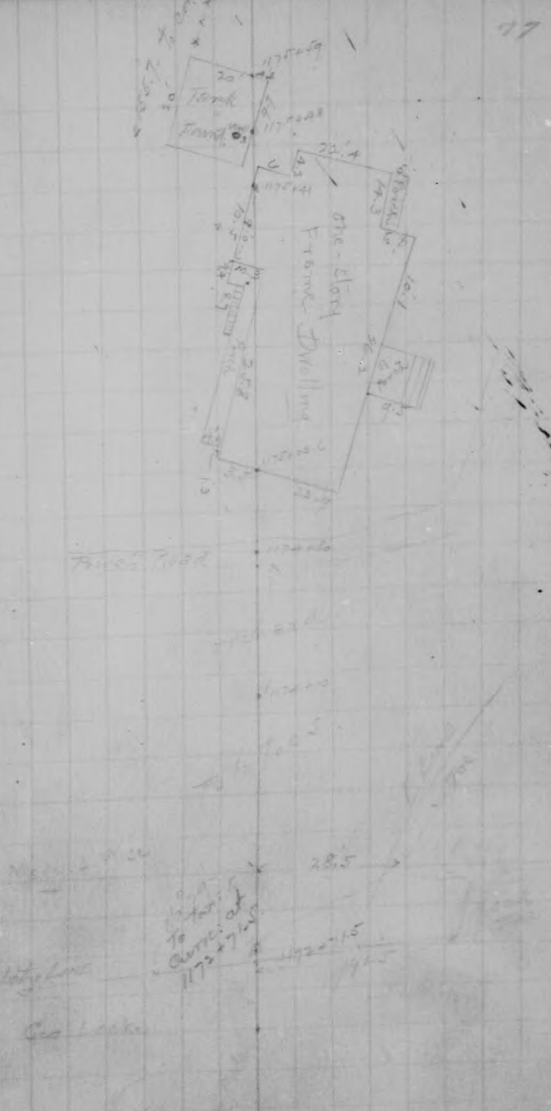
1173 0°53.7

1172+76.1 CC T3 L 0°00

+46.1 T.C 3°01'

1172+16.1 BC T.3 L.

1172



S. LINE for Spur at Walnut Grove.

Sta:	Deflec:
1183+45.94 1183 + 45.94 on Siding } = H.B. to Spur	
1182+72.22 = Δ 4.71 Rt	6°22'R.
1182+42.22 Δ EC.	21°24½
1182	19°17.8
+50	16°47.8
1181	14°17.8
+50	11°47.8
1180	9°17.8
+50 1177+00	6°47.8
1179	4°17.8
+50	1°47.8
1178+14.05	0°00

13' Rt. of T 1183+45.94

See next page.

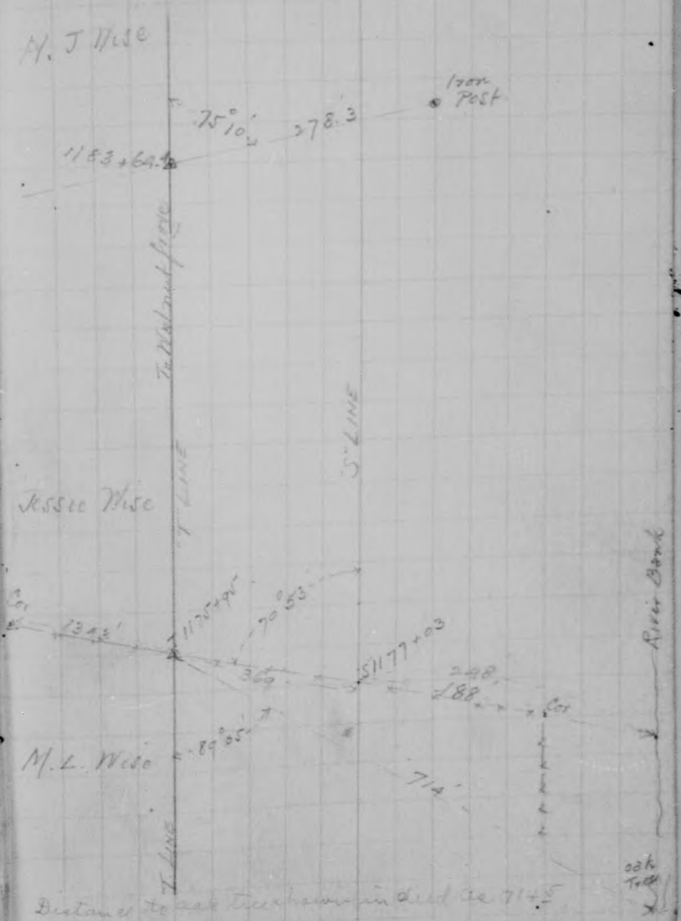
Connection of T & S. LINE with property LINES

T 1183+64.4 ppty line

T 1175+95 ppty line

June 12/07

ayS



Distance to oak tree shown in deed as 714.5

Difference [illegible]

E1394+09
S

TABLE.—VII.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Angle	Tangent	External	Angle	Tangent	External	Angle	Tangent	External
31°	1589.0	216.3	41°	2142.2	387.4	51°	2732.9	618.4
10′	1598.0	218.7	10′	2151.7	390.7	10′	2743.1	622.8
20	1606.9	221.1	20	2161.2	394.1	20	2753.4	62[illegible].2
30	1615.9	223.5	30	2170.8	397.4	30	2763.7	631.7
40	1624.9	226.0	40	2180.3	400.8	40	2773.9	636.2
50	1633.9	228.4	50	2189.9	404.2	50	2784.2	640.7
32	1643.0	230.9	42	2199.4	407.6	52	2794.5	645.2
10	1652.0	233.4	10	2209.0	411.1	10	2804.9	649.7
20	1661.0	235.9	20	2218.6	414.5	20	2815.2	654.3
30	1670.0	238.4	30	2228.1	418.0	30	2825.6	658.8
40	1679.1	241.0	40	2237.7	421.4	40	2835.9	663.4
50	1688.1	243.5	50	2247.3	425.0	50	2846.3	668.0
33	1697.2	246.1	43	2257.0	428.5	53	2856.7	672.7
10	1706.3	248.7	10	2266.6	432.0	10	2867.1	677.3
20	1715.3	251.3	20	2276.2	435.6	20	2877.5	682.0
30	1724.4	253.9	30	2285.9	439.2	30	2888.0	686.7
40	1733.5	256.5	40	2295.6	442.8	40	2898.4	691.4
50	1742.6	259.1	50	2305.2	446.4	50	2908.9	696.1
34	1751.7	261.8	44	2314.9	450.0	54	2919.4	700.9
10	1760.8	264.5	10	2324.6	453.6	10	2929.9	705.7
20	1770.0	267.2	20	2334.3	457.3	20	2940.4	710.5
30	1779.1	269.9	30	2344.1	461.0	30	2951.0	715.3
40	1788.2	272.6	40	2353.8	464.6	40	2961.5	720.1
50	1797.4	275.3	50	2363.5	468.4	50	2972.1	725.0
35	1806.6	278.1	45	2373.3	472.1	55	2982.7	729.9
10	1815.7	280.8	10	2383.1	475.8	10	2993.3	734.8
20	1824.9	283.6	20	2392.8	479.6	20	3003.9	739.7
30	1834.1	286.4	30	2402.6	483.8	30	3014.5	744.6
40	1843.3	289.2	40	2412.4	487.2	40	3025.2	749.6
50	1852.5	292.0	50	2422.3	491.0	50	3035.8	754.6
36	1861.7	294.9	46	2432.1	494.8	56	3046.5	759.6
10	1870.9	297.7	10	2441.9	498.7	10	3057.2	764.6
20	1880.1	300.6	20	2451.8	502.5	20	3067.9	769.7
30	1889.4	303.5	30	2461.7	506.4	30	3078.7	774.7
40	1898.6	306.4	40	2471.5	510.3	40	3089.4	779.8
50	1907.9	309.3	50	2481.4	514.3	50	3100.2	784.9
37	1917.1	312.2	47	2491.3	518.2	57	3110.9	790.1
10	1926.4	315.2	10	2501.2	522.2	10	3121.7	795.2
20	1935.7	318.1	20	2511.2	526.1	20	3132.6	800.4
30	1945.0	321.1	30	2521.1	530.1	30	3143.4	805.6
40	1954.3	324.1	40	2531.1	534.2	40	3154.2	810.9
50	1963.6	327.1	50	2541.0	538.2	50	3165.1	816.1
38	1972.9	330.2	48	2551.0	542.2	58	3176.0	821.4
10	1982.2	333.2	10	2561.0	546.3	10	3186.9	826.7
20	1991.5	336.3	20	2571.0	550.4	20	3197.8	832.0
30	2000.9	339.3	30	2581.0	554.5	30	3208.8	837.3
40	2010.2	342.4	40	2591.0	558.6	40	3219.7	842.7
50	2019.6	345.5	50	2601.1	562.8	50	3230.7	848.1
39	2029.0	348.6	49	2611.2	566.9	59	3241.7	853.5
10	2038.4	351.8	10	2621.2	571.1	10	3252.7	858.9
20	2047.8	354.9	20	2631.3	575.3	20	3263.7	864.3
30	2057.2	358.1	30	2641.4	579.5	30	3274.8	869.8
40	2066.6	361.3	40	2651.5	583.8	40	3285.8	875.3
50	2076.0	364.5	50	2661.6	588.0	50	3296.9	880.8
40	2085.4	367.7	50	2671.8	592.3	60	3308.0	886.4
10	2094.9	371.0	10	2681.9	596.6	10	3319.1	892.0
20	2104.3	374.2	20	2692.1	600.9	20	3330.3	897.5
30	2113.8	377.5	30	2702.3	605.3	30	3341.4	903.2
40	2123.3	380.8	40	2712.5	609.6	40	3352.6	908.8
50	2132.7	384.1	50	2722.7	61[illegible].0	50	3363.8	914.5

0737

TABLE VII.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Angle	Tangent	External	Angle	Tangent	External	Angle	Tangent	External
61°	3375.0	920.2	71°	4086.9	1368.2	81°	4893.6	1805 3
10′	3386.3	925.9	10′	4099.5	1315 6	10′	4908.0	1814.7
20	3397.5	931.6	20	4112.1	1322.9	20	4922.5	1824.1
30	3408.8	937.3	30	4124.8	1330.3	30	4937 0	1833.6
40	3420.1	943.1	40	4137.4	1337.7	40	4951.5	1843 1
50	3431.4	948.9	50	4150.1	1345.1	50	4966.1	1852.6
62	3442.7	954.8	72	4162 8	1352.6	82	4980.7	1862 2
10	3454.1	960.6	10	4175.6	1360.1	10	4995.4	1871.8
20	3465.4	966.5	20	4188.5	1367.6	20	5010.0	1881 5
30	3476.8	972.4	30	4201.2	1375.2	30	5024 8	1891.2
40	3488.3	978.3	40	4214.0	1382.8	40	5039.5	1900 9
50	3499.7	984.3	50	4226.8	1390.4	50	5054 3	1910.7
63	3511.1	990.2	73	4239 7	1398.0	83	5069.2	1920.5
10	3522.6	996.2	10	4252.6	1405.7	10	5084 0	1930.4
20	3534.1	1002.3	20	4265.6	1413.5	20	5099.0	1940 3
30	3545.6	1008.3	30	4278.5	1421.2	30	5113.9	1950.3
40	3557.2	1014.4	40	4291.5	1429.0	40	5128.9	1960.2
50	3568.7	1020.5	50	4304.6	1436.8	50	5143.9	1970.3
64	3580.3	1026.6	74	4317.6	1444.6	84	5159.0	1980 4
10	3591.9	1032.8	10	4330.7	1452.5	10	5174 1	1990.5
20	3603.5	1039.0	20	4343.8	1460 4	20	5189.3	2000 6
30	3615.1	1045.2	30	4356.9	1468.4	30	5204.4	2010.8
40	3626.8	1051.4	40	4370.1	1476.4	40	5219 7	2021.1
50	3638.5	1057.7	50	4383 3	1484 4	50	5234.9	2031.4
65	3650.2	1063.9	75	4396.5	1492.4	85	5250.3	2041.7
10	3661.9	1070.2	10	4409.8	1500.5	10	5265.6	2052.1
20	3673.7	1076.6	20	4423.1	1508.6	20	5281.0	2062.5
30	3685.4	1082.9	30	4436.4	1516.7	30	5296.4	2073.0
40	3697.2	1089.3	40	4449.7	1524.9	40	5311 9	2083 5
50	3709.0	1095.7	50	4463.1	1533 1	50	5327.4	2094.1
66	3720.9	1102.2	76	4476.5	1541.4	86	5343.0	2104.7
10	3732.7	1108.6	10	4489.9	1549.7	10	5358 6	2115.3
20	3744.6	1115 1	20	4503 4	1558.0	20	5374.2	2126.0
30	3756.5	1121.7	30	4516.9	1566.3	30	5389.9	2136 7
40	3768.5	1128.2	40	4530.4	1574.7	40	5405 6	2147.5
50	3780.4	1134.8	50	4544.0	1583.1	50	5421.4	2158.4
67	3792.4	1141.4	77	4557.6	1591.6	87	5437.2	2169.2
10	3804.4	1148.0	10	4571.2	1600.1	10	5453 1	2180 2
20	3816.4	1154.7	20	4584.8	1608.6	20	5469.0	2191.1
30	3828.4	1161.3	30	4598 5	1617.1	30	5484 9	2202 2
40	3840.5	1168.1	40	4612.2	1625.7	40	5500.9	2213.2
50	3852.6	1174.8	50	4626.0	1634.4	50	5517.0	2224.3
68	3864.7	1181.6	78	4639.8	1643.0	88	5533 1	2235.5
10	3876.8	1188.4	10	4653.6	1651.7	10	5549.2	2246 7
20	3889.0	1195.2	20	4667 4	1660 5	20	5565 4	2258.0
30	3901.2	1202.0	30	4681 3	1669.2	30	5581.6	2269.3
40	3913 4	1208.9	40	4695.2	1678.1	40	5597.8	2280.6
50	3925.6	1215.8	50	4709.2	1686 9	50	5614.2	2292 0
69	3937.9	1222.7	79	4723 2	1695.8	89	5630.5	2303.5
10	3950.2	1229.7	10	4737.2	1704.7	10	5646.9	2315 0
20	3962.5	1236.7	20	4751 2	1713.7	20	5663 4	2326 6
30	3974.8	1243.7	30	4765.3	1722.7	30	5679.9	2338.2
40	3987.2	1250.8	40	4779.4	1731 7	40	5696 4	2349 8
50	3999.5	1257.9	50	4793.6	1740.8	50	5713.0	2361.5
70	4011.9	1265.0	80	4807.7	1749.9	90	5729.7	2373.3
10	4024.4	1272.1	10	4822.0	1759.0	10	5746.3	2385.1
20	4036.8	1279.3	20	4836 2	1768.2	20	5763 1	2397.0
30	4049 3	1286.5	30	4850 5	1777.4	30	5779 9	2408 9
40	4061.8	1293.6	40	4864.8	1786.7	40	5796 7	2420 9
50	4074 4	1300.9	50	4879.2	1796.0	50	5813.6	2432.9

TABLE VII.—TANGENTS AND EXTERNALS TO A 1° CURVE.

Angle	Tangent	External	Angle	Tangent	External	Angle	Tangent	Externa
91°	5830.5	2444.9	101°	6950.6	3278.1	111°	8336 7	4386.1
10′	5847.5	2457.1	10′	6971.3	3294.1	10′	8362.7	4407.6
20	5864.6	2469.3	20	6992.0	3310.1	20	8388.9	4429.2
30	5881.7	2481.5	30	7012.7	3326.1	30	8415.1	4450.9
40	5898.8	2493 8	40	7033.6	3342.3	40	8441.5	4472.7
50	5916.0	2506.1	50	7054.5	3358.5	50	8468.0	4494.6
92	5933.2	2518.5	102	7075.5	3374.9	112	8494 6	4516.6
10	5950.5	2531.0	10	7096.6	3391.2	10	8521.3	4538.8
20	5967.9	2543.5	20	7117.8	3407.7	20	8548.1	4561.1
30	5985.3	2556.0	30	7139.0	3424.3	30	8575.0	4583.4
40	6002 7	2568.6	40	7160.3	3440.9	40	8602.1	4606.0
50	6020.2	2581.3	50	7181.7	3457.6	50	8629.3	4628.6
93	6037.8	2594.0	103	7203.2	3474.4	113	8656.6	4651.3
10	6055.4	2606.8	10	7224.7	3491.3	10	8684.0	4674.2
20	6073.1	2619.7	20	7246.3	3508.2	20	8711.5	4697.2
30	6090.8	2632.6	30	7268.0	3525.2	30	8739.2	4720.3
40	6108.6	2645.5	40	7289.8	3542.4	40	8767.0	4743.6
50	6126.4	2658.5	50	7311.7	3559.6	50	8794.9	4766.9
94	6144.3	2671.6	104	7333.6	3576.8	114	8822.9	4790.4
10	6162.6	2684.7	10	7355.6	3594.2	10	8851.0	4814.1
20	6180.2	2697.9	20	7377.8	3611.7	20	8879.3	4837.8
30	6198.3	2711.2	30	7399.9	3629.2	30	8907.7	4861.7
40	6216.4	2724.5	40	7422.2	3646.8	40	8936.3	4885.7
50	6234.6	2737.9	50	7444.6	3664.5	50	8965.0	4909.9
95	6252.8	2751.3	105	7467.0	3682.3	115	8993.8	4934 1
10	6271.1	2764 8	10	7489.6	3700.2	10	9022.7	4958.6
20	6289.4	2778.3	20	7512.2	3718.2	20	9051.7	4983 1
30	6307.9	2792 0	30	7534.9	3736.2	30	9080 9	5007.8
40	6326.3	2805.6	40	7557.7	3754.4	40	9110.3	5032.6
50	6344 8	2819.4	50	7580.5	3772.6	50	9139.8	5057.6
96	6363.4	2833.2	106	7603.5	3791.0	116	9169.4	5082.7
10	6382.1	2847.0	10	7626.6	3809.4	10	9199.1	5107.9
20	6400.8	2861.0	20	7649.7	3827.9	20	9229.0	5133.3
30	6419.5	2875.0	30	7672.9	3846.5	30	9259 0	5158.8
40	6438.4	2889.0	40	7696.3	3865.2	40	9289.2	5184.5
50	6457.3	2903.1	50	7719.7	3884.0	50	9319.5	5210.3
97	6476.2	2917.3	107	7743.2	3902.9	117	9349.9	5236.2
10	6495.2	2931.6	10	7766.8	3921.9	10	9380.5	5262.3
20	6514.3	2945.9	20	7790.5	3940.9	20	9411.3	5288.6
30	6533.4	2960.3	30	7814.3	3960.1	30	9442.2	5315.0
40	6552.6	2974.7	40	7838.1	3979.4	40	9473.2	5341.5
50	6571.9	2989.2	50	7862.1	3998.7	50	9504.4	5368.2
98	6591.2	3003.8	108	7886.2	4018.2	118	9535.7	5395.1
10	6610.6	3018.4	10	7910.4	4037.8	10	9567.2	5422.1
20	6630.1	3033.1	20	7934.6	4057.4	20	9598.9	5449.2
30	6649.6	3047.9	30	7959.0	4077.2	30	9630.7	5476.5
40	6669 2	3062.8	40	7983.5	4097.1	40	9662.6	5504.0
50	6688.8	3077.7	50	8008.0	4117.0	50	9694.7	5531.7
99	6708 6	3092.7	109	8032.7	4137.1	119	9727.0	5559.4
10	6728.4	3107.7	10	8057.4	4157.3	10	9759.4	5587.4
20	6748.2	3122.9	20	8082.3	4177.5	20	9792.0	5615.5
30	6768.1	3138.1	30	8107.3	4197.9	30	9824.8	5643.8
40	6788.1	3153.3	40	8132.3	4218.4	40	9857.7	5672.3
50	5808.2	3168.7	50	8157.5	4239.0	50	9890.8	5700.9
100	6828 3	3184.1	110	8182.8	4259.7	120	9924.0	5729.7
10	6848.5	3199.6	10	8208.2	4280.5	10	9957.5	5758.6
20	6868.8	3215.1	20	8233.7	4301.4	20	9991.0	5787.7
30	6889.2	3230.8	30	8259.3	4322.4	30	10025.0	5817.0
40	6909.6	3246.5	40	8285.0	4343.6	40	1 059.0	5846.5
50	6930.1	3262.3	50	8310.8	4364.8	50	10093.0	5876.1

TABLE VIII.—MIDDLE ORDINATES FOR RAILS.

Deg. of Curve	LENGTH OF RAILS.							Deg. of Curve	LENGTH OF RAILS.						
	32	30	28	26	24	22	20		32	30	28	26	24	22	20
1°	.022	.020	.016	.013	.011	.009	.008	16°	.356	.313	.273	.236	.200	.170	.139
2	.045	.038	.034	.029	.025	.021	.017	17	.378	.333	.290	.252	.213	.180	.148
3	.037	.058	.051	.044	.037	.031	.026	18	.400	.351	.306	.265	.225	.190	.156
4	.089	.079	.069	.060	050	.042	.035	19	423	.371	324	.280	.238	.201	.165
5	.112	.099	.086	074	.063	.053	.044	20	.445	.392	341	.296	.250	.212	174
6	.134	.117	.102	088	.076	.064	.052	21	.466	.410	.357	.309	.262	.222	.182
7	.156	.137	.120	104	088	.074	.061	22	.487	.430	.375	325	.275	.233	.191
8	.179	.158	.137	.119	.100	.085	.070	23	.509	.450	.390	338	.287	243	.199
9	201	.175	.153	.133	.112	.095	.078	24	531	469	.408	.354	.299	.253	208
10	223	196	.171	148	.125	.106	.087	25	.552	.486	.424	.367	.311	.263	.216
11	245	216	188	.163	.139	.117	.096	26	.573	.506	441	.382	.323	.274	.225
12	.268	.236	.206	179	.151	.128	.105	27	.594	.524	.457	.396	.335	.284	.233
13	.290	.254	.222	.192	.163	138	.113	28	.618	.545	.475	.411	.348	.294	242
14	312	.275	239	.207	.175	.148	.122	29	.638	.564	.491	.424	.361	303	.250
15	.334	.295	.257	.223	.188	.159	.131	30	.660	.583	508	.438	.374	.313	.259

CURVE FORMULÆ.

$$T = R \tan. \tfrac{1}{2} I$$

$$T = \frac{50 \tan. \tfrac{1}{2} I}{\text{Sin. } D}$$

$$\text{Sin. } D = \frac{50}{R}$$

$$\text{Sin. } D = \frac{50 \tan. \tfrac{1}{2} I}{T}$$

$$R = T \cot. \tfrac{1}{2} I$$

$$R = \frac{50}{\text{Sin. } D}$$

$$E = R \text{ ex. sec. } \tfrac{1}{2} I$$

$$E = T \tan. \tfrac{1}{4} I$$

$$\text{Chord def.} = \frac{\text{chord}^2}{R}$$

$$\text{No. chords} = \frac{\tfrac{1}{2} I}{D}$$

$$\text{Tan. def.} = \tfrac{1}{2} \text{ chord def.}$$

The square of any distance, divided by twice the radius, will equal the distance from tangent to curve, very nearly.

Table 7 contains Tangents and Externals to a 1° curve Tan. and Ext. to any other radius may be found, nearly enough, by dividing the Tan. or Ext opposite the given central angle by the given degree of curve.

To find Deg. of Curve, having the Central Angle and Tangent: Divide Tan. opposite the given Central Angle by the given Tangent.

To find Deg. of Curve, having the Central Angle and External: Divide Ext. opposite the given Central Angle by the given External.

To find Nat. Tan. and Nat. Ex. Sec. for any angle by Table 7: Tan. or Ext. of twice the given angle divided by the radius of a 1° curve will be the Nat. Tan. or Nat. Ex. Sec

To find angle for a given distance and deflection.

Rule 1. Multiply the given distance by .01745 (def. for 1° for 1 ft.), and divide given deflection by the product.

Rule 2. Multiply given deflection by 57.3, and divide the product by the given distance.

To find deflection for a given angle and distance: Multiply the angle by .01745 and the product by the distance.

RIGHT ANGLE TRIANGLES.—Square the altitude, divide by twice the base. Add quotient to base for hypothenuse.

Given Base 100, Alt. 10. $10^2 \div 200 = .5$. $100 + .5 = 100.5$ hyp.

Given Hyp. 100, Alt. 25. $25^2 \div 200 = 3.125$. $100 - 3.125 = 96.875 =$ Base.

Error in first example, .002; in last, .045.

To find Tons of Rail in one mile of track: multiply weight per yard by 11, and divide by 7.

3122.7
8 0 0
25227

S 25° E

680
15
1285

10.5
45

525
424
4725

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING

Roadway 14 Feet Wide. Side Slopes 1½ to 1.

For Single Track Embankment.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9
0	7.00	7.15	7.30	7.45	7.60	7.75	7.90	8.05	8.20	8.35
1	8.50	8.65	8.80	8.95	9.10	9.25	9.40	9.55	9.70	9.85
2	10.00	10.15	10.30	10.45	10.60	10.75	10.90	11.05	11.20	11.35
3	11.50	11.65	11.80	11.95	12.10	12.25	12.40	12.55	12.70	12.85
4	13.00	13.15	13.30	13.45	13.60	13.75	13.90	14.05	14.20	14.35
5	14.50	14.65	14.80	14.95	15.10	15.25	15.40	15.55	15.70	15.85
6	16.00	16.15	16.30	16.45	16.60	16.75	16.90	17.05	17.20	17.35
7	17.50	17.65	17.80	17.95	18.10	18.25	18.40	18.55	18.70	18.85
8	19.00	19.15	19.30	19.45	19.60	19.75	19.90	20.05	20.20	20.35
9	20.50	20.65	20.80	20.95	21.10	21.25	21.40	21.55	21.70	21.85
10	22.00	22.15	22.30	22.45	22.60	22.75	22.90	23.05	23.20	23.35
11	23.50	23.65	23.80	23.95	24.10	24.25	24.40	24.55	24.70	24.85
12	25.00	25.15	25.30	25.45	25.60	25.75	25.90	26.05	26.20	26.35
13	26.50	26.65	26.80	26.95	27.10	27.25	27.40	27.55	27.70	27.85
14	28.00	28.15	28.30	28.45	28.60	28.75	28.90	29.05	29.20	29.35
15	29.50	29.65	29.80	29.95	30.10	30.25	30.40	30.55	30.70	30.85
16	31.00	31.15	31.30	31.45	31.60	31.75	31.90	32.05	32.20	32.35
17	32.50	32.65	32.80	32.95	33.10	33.25	33.40	33.55	33.70	33.85
18	34.00	34.15	34.30	34.45	34.60	34.75	34.90	35.05	35.20	35.35
19	35.50	35.65	35.80	35.95	36.10	36.25	36.40	36.55	36.70	36.85
20	37.00	37.15	37.30	37.45	37.60	37.75	37.90	38.05	38.20	38.35
21	38.50	38.65	38.80	38.95	39.10	39.25	39.40	39.55	39.70	39.85
22	40.00	40.15	40.30	40.45	40.60	40.75	40.90	41.05	41.20	41.35
23	41.50	41.65	41.80	41.95	42.10	42.25	42.40	42.55	42.70	42.85
24	43.00	43.15	43.30	43.45	43.60	43.75	43.90	44.05	44.20	44.35
25	44.50	44.65	44.80	44.95	45.10	45.25	45.40	45.55	45.70	45.85
26	46.00	46.15	46.30	46.45	46.60	46.75	46.90	47.05	47.20	47.35
27	47.50	47.65	47.80	47.95	48.10	48.25	48.40	48.55	48.70	48.85
28	49.00	49.15	49.30	49.45	49.60	49.75	49.90	50.05	50.20	50.35
29	50.50	50.65	50.80	50.95	51.10	51.25	51.40	51.55	51.70	51.85
30	52.00	52.15	52.30	52.45	52.60	52.75	52.90	53.05	53.20	53.35
31	53.50	53.65	53.80	53.95	54.10	54.25	54.40	54.55	54.70	54.85
32	55.00	55.15	55.30	55.45	55.60	55.75	55.90	56.05	56.20	56.35
33	56.50	56.65	56.80	56.95	57.10	57.25	57.40	57.55	57.70	57.85
34	58.00	58.15	58.30	58.45	58.60	58.75	58.90	59.05	59.20	59.35
35	59.50	59.65	59.80	59.95	60.10	60.25	60.40	60.55	60.70	60.85
36	61.00	61.15	61.30	61.45	61.60	61.75	61.90	62.05	62.20	62.35
37	62.50	62.65	62.80	62.95	63.10	63.25	63.40	63.55	63.70	63.85
38	64.00	64.15	64.30	64.45	64.60	64.75	64.90	65.05	65.20	65.35
39	65.50	65.65	65.80	65.95	66.10	66.25	66.40	66.55	66.70	66.85
40	67.00	67.15	67.30	67.45	67.60	67.75	67.90	68.05	68.20	68.35

Calculated by F. E. Paradis, C. E.

EUGENE DIETZGEN CO.
MANUFACTURERS & IMPORTERS OF
DRAWING MATERIALS AND
SURVEYING INSTRUMENTS

5 17 84 + 12.61

13

1164 + 84 64 4 3003

1155

1155 + 72 ¼
134

5.23

95.57

DISTANCES FROM CENTER OF ROADWAY FOR CROSS-SECTIONING.

Roadway 16 Feet Wide. Side Slopes 1½ to 1.

For Single Track Embankment.

	0	.1	.2	.3	.4	.5	.6	.7	.8	.9	
0	8.0	8.2	8.3	8.5	8.6	8.8	8.9	9.1	9.2	9.4	0
1	9.5	9.7	9.8	10.0	10.1	10.3	10.4	10.6	10.7	10.9	1
2	11.0	11.2	11.3	11.5	11.6	11.8	11.9	12.1	12.2	12.4	2
3	12.5	12.7	12.8	13.0	13.1	13.3	13.4	13.6	13.7	13.9	3
4	14.0	14.2	14.3	14.5	14.6	14.8	14.9	15.1	15.2	15.4	4
5	15.5	15.7	15.8	16.0	16.1	16.3	16.4	16.6	16.7	16.9	5
6	17.0	17.2	17.3	17.5	17.6	17.8	17.9	18.1	18.2	18.4	6
7	18.5	18.7	18.8	19.0	19.1	19.3	19.4	19.6	19.7	19.9	7
8	20.0	20.2	20.3	20.5	20.6	20.8	20.9	21.1	21.2	21.4	8
9	21.5	21.7	21.8	22.0	22.1	22.3	22.4	22.6	22.7	22.9	9
10	23.0	23.2	23.3	23.5	23.6	23.8	23.9	24.1	24.2	24.4	10
11	24.5	24.7	24.8	25.0	25.1	25.3	25.4	25.6	25.7	25.9	11
12	26.0	25.2	26.3	26.5	26.6	26.8	26.9	27.1	27.2	27.4	12
13	27.5	27.7	27.8	28.0	28.1	28.3	28.4	28.6	28.7	28.9	13
14	29.0	29.2	29.3	29.5	29.6	29.8	29.9	30.1	30.2	30.4	14
15	30.5	30.7	30.8	31.0	31.1	31.3	31.4	31.6	31.7	31.9	15
16	32.0	32.2	32.3	32.5	32.6	32.8	32.9	33.1	33.2	33.4	16
17	33.5	33.7	33.8	34.0	34.1	34.3	34.4	34.6	34.7	34.9	17
18	35.0	35.2	35.3	35.5	35.6	35.8	35.9	36.1	36.2	36.4	18
19	36.5	36.7	36.8	37.0	37.1	37.3	37.4	37.6	37.7	37.9	19
20	38.0	38.2	38.3	38.5	38.6	38.8	38.9	39.1	39.2	39.4	20
21	39.5	39.7	39.8	40.0	40.1	40.3	40.4	40.6	40.7	40.9	21
22	41.0	41.2	41.3	41.5	41.6	41.8	41.9	42.1	42.2	42.4	22
23	42.5	42.7	42.8	43.0	43.1	43.3	43.4	43.6	43.7	43.9	23
24	44.0	44.2	44.3	44.5	44.6	44.8	44.9	45.1	45.2	45.4	24
25	45.5	45.7	45.8	46.0	46.1	46.3	46.4	46.6	46.7	46.9	25
26	47.0	47.2	47.3	47.5	47.6	47.8	47.9	48.1	48.2	48.4	26
27	48.5	48.7	48.8	49.0	49.1	49.3	49.4	49.6	49.7	49.9	27
28	50.0	50.2	50.3	50.5	50.6	50.8	50.9	51.1	51.2	51.4	28
29	51.5	51.7	51.8	52.0	52.1	52.3	52.4	52.6	52.7	52.9	29
30	53.0	53.2	53.3	53.5	53.6	53.8	53.9	54.1	54.2	54.4	30
31	54.5	54.7	54.8	55.0	55.1	55.3	55.4	55.6	55.7	55.9	31
32	56.0	56.2	56.3	56.5	56.6	56.8	56.9	57.1	57.2	57.4	32
33	57.5	57.7	57.8	58.0	58.1	58.3	58.4	58.6	58.7	58.9	33
34	59.0	59.2	59.3	59.5	59.6	59.8	59.9	60.1	60.2	60.4	34
35	60.5	60.7	60.8	61.0	61.1	61.3	61.4	61.6	61.7	61.9	35
36	62.0	62.2	62.3	62.5	62.6	62.8	62.9	63.1	63.2	63.4	36
37	63.5	63.7	63.8	64.0	64.1	64.3	64.4	64.6	64.7	64.9	37
38	65.0	65.2	65.3	65.5	65.6	65.8	65.9	66.1	66.2	66.4	38
39	66.5	66.7	66.8	67.0	67.1	67.3	67.4	67.6	67.7	67.9	39
40	68.0	68.2	68.3	68.5	68.6	68.8	68.9	69.1	69.2	69.4	40

Calculated by F. E. Paradis, C. E.

0740